Length Composition of Pacific Cod *(Gadus macrocephalus)* from Commercial Landings by Canadian Trawlers, 1974-85

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LENGTH COMPOSITION OF PACIFIC COD (*Gadus macrocephalus*) FROM COMMERCIAL LANDINGS BY CANADIAN TRAWLERS, 1974-85

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ABSTRACT

Foucher, R. P. 1987. Length composition of Pacific cod (Gadus macrocephalus) from commercial landings by Canadian trawlers, 1974-85. Can. Data Rep. Fish. Aquat. Sci. 621: 63 p.

Length composition in percent, by quarter year, by area, is reported to update two previous reports. Samples included cover the major areas and quarter years for the 12-year period 1974-85. Data are not included for quarter years where there are only a few years with samples. Complete inventories of the numbers sampled by area, by month, covering the full history of the port sampling program are included.

RESUME

Foucher, R. P. 1987. Length composition of Pacific cod (Gadus macrocephalus) from commercial landings by Canadian trawlers, 1974-85. Can. Data Rep. Fish. Aquat. Sci. 621: 63 p.

La présente mise à jour de deux rapports précédents vise la composition par longueurs en pourcentage, par trimestre et par zone. Les échantillons étudiés proviennent des principales zones exploitées au cours des plus importants trimestres de la période 1974-1985. On ne présente pas de données pour les trimestres où l'on ne dispose d'échantillons que pour quelques années. Sont aussi inclus des inventaires complets des quantités échantillonnées par zone et par mois, inventaires qui portent sur l'historique complet du programme d'échantillonnage à quai.

INTRODUCTION

Pacific cod length-frequency data have been reported in two previous publications covering the period 1951-66 (Ketchen 1967) and 1967-73 (Chilton and Smith 1975). This report is an update of these with the length frequencies reported for the period 1974-85.

Sampling of the commercial landings of Pacific cod (Gadus macrocephalus) began about 1950. This species, at first relatively unimportant, reached a peak in production in 1966 when it accounted for more than 55% of trawl-caught foodfish. Sampling has varied seasonally and geographically according to sampling opportunities which are closely related to production.

Samples are grouped by major area, minor area or locality (fishing ground) depending on the separation normally used for analysis. Length frequencies are reported by 1-cm interval rather than by 3-cm interval as in the earlier reports. Mean lengths and weights are also not included as, in the case of Pacific cod where length frequencies are often multimodal, means can be of little significance. The samples included here account for a total of 127,205 fish.

Some samples, such as those of discarded fish or non-random samples have been omitted. The samples included are those deemed usable for determination of age composition. Age compositions have been determined using the method of Foucher and Fournier (1982) for various areas. They have been reported for the Strait of Georgia (Foucher and Giudici 1985), the west coast of Vancouver Island (Westrheim and Foucher 1983), Queen Charlotte Sound (Foucher and Westrheim 1983) and Hecate Strait (Foucher and Jacobs 1981).

Any discrepancies between the inventories included here and those published earlier may be due to the above-noted omissions and/or later revisions of the area assigned to samples, or corrections to errors.

Table 1 provides an index to the length-frequency tables and Figures 1-4 show area locations. The appendix tables report the numbers of fish sampled by month, year and area with an index by area in Appendix table 1. These include all but a few minor grounds and over 575,000 fish.

ACKNOWLEDGEMENTS

Delia Plested assisted in compiling and checking the inventories.

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Chilton, D. E., and J. E. Smith. 1975. Data record: Pacific cod (Gadus macrocephalus) A. Catch statistics of the Canadian and United States trawl fishery, 1966-73 B. Length composition of commercial landings by Canadian trawlers, 1967-73. Fish. Res. Bd. Can. MS Rep. 1341: 62 p.

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Westrheim, S. J., and R. P. Foucher. 1983. Canada-U.S. landing statistics and age compositions for Pacific cod (Gadus macrocephalus) from trawling grounds off the southwest coast of Vancouver Island, 1956-81. Can. Data Rep. Fish Aquat. Sci. 371: 35 p.

Table 1. Index to tables of length-frequency data.

Quarter year/area	Table number
Hecate Strait	
Apr-Jun Horseshoe	2
Jul-Sep "	3
Jan-Mar Reef Island	4
Apr-Jun "	5
Jan-Mar Two Peaks-Butterworth	6
Apr-Jun "	7
Jul-Sep "	8
Jan-Mar White Rocks-Bonilla	9
Apr-Jun "	10
Jul-Sep "	11
Oct-Dec "	12
Queen Charlotte Sound	
Apr-Jun Area 5A	13
Jul-Sep "	14
Apr-Jun Area 5B	15
Jul-Sep "	16
West Coast Vancouver Island	
Apr-Jun Area 3D	17
Jan-Mar Amphitrite Bank	18
Apr-Jun "	19
Apr-Jun Big Bank	20
Jul-Sep "	21
Apr-Jun Swiftsure	22
Jul-Sep "	23
Straits of Georgia and Juan de Fuca	
Jan-Mar MSA 14	24
Apr-Jun "	25
Oct-Dec "	26
Jan-Mar Nanoose	27
Jan-Mar MSA 17 & 18	28
Apr-Jun "	29
Jan-Mar MSA 19	30
Jul-Sep "	31
Oct-Dec "	32
Jan-Mar MSA 20	33

Table 2. Length-frequency distribution (in percent) of Pacific cod from Horseshoe, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
30	-	-	-	-	-	-	0.1	-	-	-	-	-
31	-	-	-	-	-	-	0.0	-	0.1	-	-	-
32	-	-	-	-	-	-	0.0	-	0.0	-	-	-
33	-	-	-	-	-	-	0.0	-	0.0	-	-	-
34	-	-	-	-	-	-	0.1	-	0.2	-	-	-
35	-	-	-	-	-	0.1	0.0	-	0.1	-	-	-
36	-	-	-	-	-	0.0	0.0	-	0.2	-	-	-
37	-	-	-	-	-	0.2	0.0	-	0.1	-	-	-
38	-	-	-	0.6	-	0.0	0.2	-	0.3	-	-	-
39	0.6	-	-	0.0	-	0.1	0.1	-	0.5	-	-	-
40	0.7	0.1	-	0.8	-	0.7	0.2	-	0.2	-	-	-
41	1.1	0.3	0.4	0.3	-	1.1	0.4	-	0.8	-	-	-
42	1.9	0.0	0.6	0.8	0.1	1.5	0.5	-	1.3	0.5	-	-
43	3.3	0.0	0.2	2.2	0.4	2.5	0.5	-	1.8	0.0	0.8	-
44	3.3	0.2	0.9	2.8	0.2	3.7	0.6	-	1.3	0.0	0.8	-
45	5.6	1.1	1.1	4.4	0.1	5.1	1.4	-	2.8	0.0	1.2	-
46	7.0	0.8	2.1	3.6	0.7	8.1	1.2	-	1.6	0.5	2.8	-
47	8.0	1.4	3.0	4.2	0.5	6.3	1.4	-	1.5	0.0	2.0	-
48	6.7	2.0	2.6	4.2	1.3	5.3	2.7	-	3.2	2.4	4.0	-
49	5.8	2.9	4.3	4.2	2.5	4.9	2.6	-	3.0	1.0	4.5	-
50	5.7	3.7	4.5	5.5	2.1	4.6	3.7	-	3.5	2.9	6.9	-
51	5.4	3.5	4.1	4.7	3.5	2.9	3.5	-	4.2	1.0	2.8	-
52	4.5	5.3	4.3	3.6	4.2	3.7	5.4	-	5.2	1.0	3.2	-
53	4.0	5.5	4.1	3.3	4.0	2.7	4.5	-	6.9	4.3	1.2	-
54	2.8	6.3	7.1	2.5	5.1	2.9	5.9	-	7.0	3.3	2.0	-
55	2.7	7.6	7.5	7.8	5.9	2.5	5.3	-	7.1	3.3	1.2	-
56	2.5	6.0	4.5	5.8	5.6	2.9	6.5	-	4.3	3.3	0.4	-
57	2.8	7.1	8.2	3.6	6.4	2.2	6.0	-	5.6	5.3	2.8	-
58	2.7	5.4	4.9	5.3	5.8	3.3	6.1	-	5.7	8.1	1.6	-
59	2.7	5.0	5.6	5.0	4.5	2.3	5.8	-	6.5	6.2	4.5	-
60	1.5	5.9	4.7	2.8	4.9	2.5	5.9	-	4.7	9.6	3.6	-
61	1.5	5.3	4.7	4.7	5.1	3.6	4.2	-	3.2	9.1	3.2	-
62	1.7	3.9	4.5	3.0	4.7	3.4	4.2	-	2.9	8.1	7.7	-
63	1.7	4.1	4.3	2.2	4.0	4.1	3.3	-	2.5	7.2	3.6	-
64	1.3	2.2	1.3	2.5	4.5	2.9	3.2	-	1.8	4.8	5.3	-
65	1.9	2.1	0.9	2.5	2.8	3.3	2.9	-	2.1	4.8	1.2	-
66	1.7	1.6	2.4	1.9	3.7	2.8	2.2	-	1.9	3.3	2.0	-
67	1.3	1.6	0.6	0.8	2.4	2.2	1.1	-	1.0	3.8	4.0	-
68	1.3	1.2	1.3	0.8	2.6	1.7	1.8	-	1.1	1.0	5.3	-
69	1.1	1.1	1.5	0.6	1.7	1.4	1.2	-	0.6	1.0	1.2	-
70	1.1	1.3	0.4	0.0	1.7	0.8	1.5	-	1.0	1.9	6.5	-
71	1.6	1.4	0.2	0.6	2.0	0.6	1.4	-	0.8	1.4	3.6	-
72	0.5	1.3	0.9	0.6	1.1	0.3	0.7	-	0.7	0.5	2.0	-
73	0.7	0.1	0.0	0.3	1.1	0.1	0.6	-	0.6	0.0	1.6	-
74	0.2	0.8	0.4	0.3	0.5	0.4	0.3	-	0.3	0.0	2.0	-
75	0.5	0.7	0.0	0.0	0.9	0.1	0.1	-	0.2	0.0	1.2	-
76	0.2	0.7	0.2	0.3	0.5	0.0	0.3	-	-	0.0	2.0	-
77	0.2	0.1	0.2	0.3	1.1	0.1	0.1	-	-	0.0	0.0	-
78	0.0	0.0	0.6	0.0	0.1	0.1	0.2	-	-	0.5	0.4	-
79	0.0	0.1	0.4	0.3	0.2	0.1	0.1	-	-	-	0.0	-
80	0.0	0.1	0.2	0.3	0.3	-	0.0	-	-	-	0.4	-
81	0.1	0.0	0.0	0.0	0.4	-	0.0	-	-	-	-	-
82	0.1	0.1	0.2	0.3	0.3	-	0.0	-	-	-	-	-
83	-	-	-	-	0.1	-	0.0	-	-	-	-	-
84	-	-	-	-	0.1	-	0.0	-	-	-	-	-
85	-	-	-	-	-	-	0.0	-	-	-	-	-
86	-	-	-	-	-	-	0.0	-	-	-	-	-
87	-	-	-	-	-	-	0.0	-	-	-	-	-
88	-	-	-	-	-	-	0.0	-	-	-	-	-
89	-	-	-	-	-	-	0.0	-	-	-	-	-
90	-	-	-	-	-	-	0.0	-	-	-	-	-
91	-	-	-	-	-	-	0.1	-	-	-	-	-
TOTAL	826	903	466	361	918	1695	1296	0	1035	209	247	0

Table 3. Length-frequency distribution (in percent) of Pacific cod from Horseshoe, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
36	-	-	-	-	-	0.1	-	-	-	-	-	-
37	-	-	-	-	-	0.1	-	-	-	-	-	-
38	-	-	-	-	-	0.0	-	-	-	-	-	-
39	-	-	-	-	-	0.1	-	-	-	-	-	-
40	-	-	-	-	-	0.4	0.3	-	-	-	-	-
41	0.2	-	-	1.8	-	0.6	0.0	-	0.2	-	-	-
42	0.2	-	0.5	1.8	-	1.0	0.3	-	0.2	-	-	-
43	0.7	-	0.8	2.6	-	1.8	0.3	-	0.0	-	-	-
44	1.3	-	1.1	2.6	-	2.5	1.4	-	1.2	-	-	-
45	2.5	-	1.4	4.4	0.8	4.6	2.8	-	0.5	-	-	-
46	3.1	-	2.6	3.5	0.4	5.4	2.2	-	2.6	-	-	-
47	4.3	-	2.7	3.5	1.7	6.5	2.8	-	2.0	-	-	-
48	3.9	-	2.6	3.5	2.1	6.8	2.2	-	3.6	-	-	-
49	5.5	-	4.8	2.6	0.0	7.5	2.2	-	3.1	-	-	-
50	6.1	-	3.4	0.9	2.1	8.2	3.1	-	4.9	-	-	-
51	4.6	-	3.4	1.8	2.9	5.4	3.3	-	4.9	-	-	-
52	5.0	-	4.0	1.8	2.5	6.8	4.2	-	6.8	-	-	-
53	4.4	-	4.2	1.8	3.8	3.9	3.9	-	8.2	-	-	-
54	2.6	-	4.5	0.9	4.6	4.9	5.0	-	7.2	-	-	-
55	3.4	-	7.1	0.9	7.5	4.1	3.6	-	6.8	-	-	-
56	2.7	-	4.8	1.8	4.6	1.5	4.4	-	6.6	-	-	-
57	2.5	-	6.4	3.5	4.2	1.0	4.4	-	5.4	-	-	-
58	3.3	-	6.7	3.5	8.3	2.4	5.6	-	3.5	-	-	-
59	3.1	-	6.1	3.5	5.8	1.8	5.3	-	5.4	-	-	-
60	2.8	-	5.8	2.6	6.3	1.8	6.9	-	4.6	-	-	-
61	2.8	-	4.2	5.3	5.8	2.1	5.0	-	3.0	-	-	-
62	2.8	-	3.5	7.9	5.8	1.4	4.7	-	3.8	-	-	-
63	3.1	-	2.1	6.1	6.3	2.5	3.9	-	3.5	-	-	-
64	4.3	-	3.2	11.4	5.8	2.3	4.4	-	3.3	-	-	-
65	4.0	-	1.9	5.3	3.3	2.1	4.7	-	1.8	-	-	-
66	2.7	-	1.8	1.8	4.2	1.8	3.1	-	1.5	-	-	-
67	3.0	-	1.8	2.6	1.7	2.0	2.5	-	1.2	-	-	-
68	3.0	-	2.6	4.4	2.5	2.1	1.1	-	1.0	-	-	-
69	2.5	-	1.1	0.9	1.7	1.3	2.5	-	1.2	-	-	-
70	1.6	-	0.8	0.9	1.7	0.8	0.8	-	0.7	-	-	-
71	1.8	-	1.1	0.9	0.8	1.0	1.1	-	0.7	-	-	-
72	1.9	-	0.3	1.8	0.4	0.3	0.0	-	0.7	-	-	-
73	0.9	-	0.8	0.0	0.8	0.3	0.8	-	0.2	-	-	-
74	1.4	-	1.0	0.9	0.0	0.1	0.3	-	-	-	-	-
75	0.6	-	0.6	0.0	0.0	0.0	0.6	-	-	-	-	-
76	0.7	-	0.3	0.0	1.3	0.1	0.0	-	-	-	-	-
77	0.2	-	0.0	0.9	0.0	0.0	0.0	-	-	-	-	-
78	0.2	-	0.0	-	0.0	0.0	0.0	-	-	-	-	-
79	0.2	-	0.2	-	0.4	0.3	0.3	-	-	-	-	-
80	0.1	-	-	-	-	0.1	-	-	-	-	-	-
81	0.0	-	-	-	-	-	-	-	-	-	-	-
82	0.1	-	-	-	-	-	-	-	-	-	-	-
83	0.0	-	-	-	-	-	-	-	-	-	-	-
84	0.0	-	-	-	-	-	-	-	-	-	-	-
85	0.0	-	-	-	-	-	-	-	-	-	-	-
86	0.0	-	-	-	-	-	-	-	-	-	-	-
87	0.1	-	-	-	-	-	-	-	-	-	-	-
TOTAL	935	0	624	114	240	710	360	0	607	0	0	0

Table 4. Length-frequency distribution (in percent) of Pacific cod from Reef Island, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
30	-	-	-	-	-	0.2	-	-	-	-	-	-
31	-	-	-	-	-	0.0	-	-	-	-	-	-
32	-	-	-	-	-	0.0	-	-	-	-	-	-
33	-	-	-	-	-	0.0	-	-	-	-	-	-
34	-	-	-	-	-	0.0	-	-	-	-	-	-
35	-	-	-	-	-	0.0	-	-	-	-	-	-
36	-	-	-	-	-	0.0	-	-	-	-	-	-
37	-	-	-	-	0.3	0.4	-	-	-	-	-	-
38	-	-	-	-	0.0	0.2	-	-	-	-	-	-
39	-	-	-	-	0.3	0.2	-	-	0.1	-	-	-
40	1.6	-	-	-	0.3	0.2	0.6	-	0.0	-	-	-
41	2.7	0.3	-	-	0.6	1.1	0.2	-	0.0	-	-	-
42	2.3	0.6	-	-	0.6	1.1	0.6	-	0.1	-	-	-
43	0.8	1.0	0.3	-	1.2	2.2	0.8	-	0.4	0.1	-	-
44	2.7	0.3	0.6	1.7	2.3	2.0	2.2	-	0.5	0.3	0.4	-
45	4.3	1.0	0.6	1.7	2.6	2.4	2.2	-	1.6	0.0	0.2	0.4
46	2.7	1.0	1.4	0.8	2.9	3.3	2.2	-	2.0	0.1	2.1	1.2
47	4.3	2.5	1.1	3.3	2.3	0.9	4.4	-	2.8	0.9	0.6	1.7
48	2.7	1.3	2.6	0.8	5.8	2.2	5.2	-	3.8	0.4	1.1	2.5
49	1.6	1.9	4.0	2.5	7.3	0.9	3.6	-	6.6	1.0	0.6	1.2
50	1.9	2.9	5.5	0.8	7.0	1.1	5.2	-	6.4	2.4	1.1	0.8
51	2.3	5.1	5.2	5.0	7.8	2.0	4.8	-	5.2	2.2	1.7	4.6
52	2.7	3.5	4.3	3.3	6.7	2.6	4.4	-	7.5	1.8	0.4	2.1
53	1.2	4.1	5.5	7.5	7.3	0.7	2.6	-	6.7	2.0	1.5	4.6
54	3.5	5.7	5.2	6.7	6.4	2.9	3.8	-	6.6	2.8	1.9	4.1
55	3.5	4.5	8.0	4.2	3.8	2.2	3.4	-	7.9	5.0	1.7	7.5
56	2.3	5.1	4.6	5.0	6.1	3.1	3.6	-	4.0	4.8	2.4	9.5
57	2.3	2.5	5.5	6.7	4.9	5.1	4.2	-	5.8	5.1	3.4	7.1
58	1.6	3.8	4.9	6.7	5.5	4.2	3.4	-	4.0	6.2	2.6	9.5
59	3.5	5.1	3.2	8.3	1.5	5.7	3.4	-	3.1	5.5	4.3	8.7
60	5.0	2.5	6.0	5.0	2.0	5.5	3.4	-	4.8	7.8	4.9	5.8
61	5.0	1.9	7.2	5.0	2.9	5.9	2.6	-	2.4	5.1	5.3	4.1
62	4.3	3.2	3.2	3.3	1.5	6.6	2.8	-	2.6	6.4	5.1	6.2
63	4.3	2.5	3.7	2.5	0.6	5.7	3.4	-	1.6	6.1	3.8	2.5
64	5.0	3.5	1.7	3.3	0.6	4.0	2.8	-	1.5	5.6	5.3	3.7
65	3.9	2.5	2.9	4.2	1.5	4.6	2.0	-	1.9	3.9	4.9	2.1
66	3.1	3.5	1.4	0.8	0.9	4.8	1.8	-	0.9	6.5	6.6	2.9
67	1.9	1.3	1.1	2.5	0.3	2.4	3.2	-	1.2	3.4	5.1	0.0
68	2.7	2.9	3.2	0.8	0.9	2.0	2.6	-	0.4	3.2	2.6	1.2
69	2.7	2.9	1.1	0.8	0.3	2.2	2.4	-	0.7	2.8	4.5	1.2
70	3.1	2.2	1.1	0.0	1.5	2.0	1.8	-	0.8	2.2	4.7	1.2
71	3.1	1.6	0.0	1.7	0.3	1.3	2.6	-	0.9	1.3	5.1	0.0
72	1.9	4.5	0.6	0.0	0.9	1.5	1.6	-	0.9	1.4	3.8	0.4
73	1.9	3.5	0.9	1.7	0.3	0.9	1.0	-	0.4	0.9	5.6	0.4
74	0.4	1.9	0.3	0.8	0.0	0.4	0.8	-	0.7	1.1	1.5	0.8
75	0.8	1.0	0.3	0.0	0.3	0.7	0.6	-	0.4	0.4	0.9	0.0
76	0.0	1.3	0.9	0.0	0.6	0.9	0.6	-	0.5	0.4	0.6	1.2
77	0.0	1.3	0.0	0.8	0.6	0.4	0.4	-	0.8	0.4	0.9	0.0
78	0.0	1.0	0.3	0.0	0.0	0.2	0.4	-	0.1	0.1	0.4	0.0
79	0.0	1.0	0.6	0.0	0.3	0.0	1.0	-	0.0	0.1	0.6	0.0
80	0.0	0.0	0.6	0.0	0.0	0.2	0.4	-	0.3	0.1	0.4	0.0
81	0.0	0.6	0.3	0.8	0.3	0.0	0.0	-	0.5	0.0	0.4	0.4
82	0.0	0.3	0.3	0.0	0.0	0.0	0.0	-	0.3	0.1	0.2	-
83	0.0	0.3	-	0.0	0.0	0.4	0.0	-	-	0.0	0.0	-
84	0.4	0.0	-	0.8	0.0	0.2	0.2	-	-	0.0	0.2	-
85	-	0.3	-	-	0.0	0.0	-	-	-	0.0	0.0	-
86	-	0.0	-	-	0.0	0.0	-	-	-	0.1	0.0	-
87	-	0.0	-	-	0.0	0.0	-	-	-	0.0	0.2	-
88	-	0.0	-	-	0.3	0.2	-	-	-	0.1	-	-
89	-	0.0	-	-	-	-	-	-	-	-	-	-
90	-	0.0	-	-	-	-	-	-	-	-	-	-
91	-	0.0	-	-	-	-	-	-	-	-	-	-
92	-	0.0	-	-	-	-	-	-	-	-	-	-
93	-	0.0	-	-	-	-	-	-	-	-	-	-
94	-	0.0	-	-	-	-	-	-	-	-	-	-
95	-	0.0	-	-	-	-	-	-	-	-	-	-
96	-	0.0	-	-	-	-	-	-	-	-	-	-
97	-	0.3	-	-	-	-	-	-	-	-	-	-
TOTAL	258	314	348	120	344	455	496	0	745	787	468	241

Table 5. Length-frequency distribution (in percent) of Pacific cod from Reef Island, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
43	-	1.3	0.4	-	0.9	-	-	-	-	-	-	-
44	-	0.9	0.0	-	1.8	-	-	-	-	-	-	-
45	-	4.0	0.4	-	2.7	-	-	-	-	-	-	-
46	-	5.3	0.0	-	1.8	-	-	-	-	-	-	-
47	-	4.4	0.8	-	4.4	-	-	-	-	-	-	-
48	-	1.3	1.3	-	2.7	-	-	-	-	-	-	-
49	-	3.1	1.7	-	6.2	-	-	-	-	-	-	-
50	-	2.7	3.0	-	4.4	-	-	-	-	-	-	-
51	-	4.4	8.4	-	7.1	-	-	-	-	-	-	-
52	-	7.1	8.9	-	7.1	-	-	-	-	-	-	-
53	-	8.4	5.5	-	1.8	-	-	-	-	-	-	-
54	-	7.5	6.3	-	4.4	-	-	-	-	-	-	-
55	-	7.1	9.7	-	5.3	-	-	-	-	-	-	-
56	-	8.4	5.9	-	6.2	-	-	-	-	-	-	-
57	-	5.3	5.5	-	3.5	-	-	-	-	-	-	-
58	-	4.9	5.5	-	3.5	-	-	-	-	-	-	-
59	-	4.0	2.5	-	1.8	-	-	-	-	-	-	-
60	-	4.4	5.9	-	4.4	-	-	-	-	-	-	-
61	-	3.5	5.1	-	2.7	-	-	-	-	-	-	-
62	-	2.7	3.4	-	1.8	-	-	-	-	-	-	-
63	-	2.2	2.1	-	1.8	-	-	-	-	-	-	-
64	-	1.3	0.8	-	2.7	-	-	-	-	-	-	-
65	-	1.8	3.0	-	3.5	-	-	-	-	-	-	-
66	-	0.9	0.4	-	4.4	-	-	-	-	-	-	-
67	-	0.9	3.0	-	3.5	-	-	-	-	-	-	-
68	-	0.9	1.7	-	0.0	-	-	-	-	-	-	-
69	-	0.0	1.3	-	0.0	-	-	-	-	-	-	-
70	-	0.4	2.1	-	1.8	-	-	-	-	-	-	-
71	-	0.4	1.3	-	0.9	-	-	-	-	-	-	-
72	-	0.4	0.8	-	2.7	-	-	-	-	-	-	-
73	-	-	1.3	-	0.9	-	-	-	-	-	-	-
74	-	-	0.4	-	0.0	-	-	-	-	-	-	-
75	-	-	0.0	-	0.9	-	-	-	-	-	-	-
76	-	-	0.4	-	0.0	-	-	-	-	-	-	-
77	-	-	0.0	-	0.0	-	-	-	-	-	-	-
78	-	-	0.0	-	0.0	-	-	-	-	-	-	-
79	-	-	0.8	-	0.0	-	-	-	-	-	-	-
80	-	-	0.4	-	0.0	-	-	-	-	-	-	-
81	-	-	-	-	0.0	-	-	-	-	-	-	-
82	-	-	-	-	1.8	-	-	-	-	-	-	-
83	-	-	-	-	0.9	-	-	-	-	-	-	-
TOTAL	0	226	237	0	113	0	0	0	0	0	0	0

Table 6. Length-frequency distribution (in percent) of Pacific cod from Two Peaks-Butterworth, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
27	-	-	-	-	-	-	0.1	-	-	-	-	-
28	-	-	-	-	-	-	0.0	-	-	-	-	-
29	-	-	-	-	-	-	0.0	-	-	-	-	-
30	-	-	-	-	-	-	0.0	-	-	-	-	-
31	-	-	-	-	-	-	0.0	-	-	-	-	-
32	-	-	-	-	-	-	0.0	-	-	-	-	-
33	-	-	-	-	-	-	0.0	-	-	-	-	-
34	-	-	-	-	-	-	0.0	-	-	-	-	-
35	-	-	-	-	-	-	0.0	-	-	-	-	-
36	-	-	-	-	-	-	0.0	-	-	-	-	-
37	-	-	-	-	-	-	0.0	-	-	-	-	-
38	-	-	-	-	-	-	0.1	-	-	-	-	-
39	-	-	-	-	-	-	0.4	-	-	-	-	-
40	-	-	-	-	-	-	0.4	-	-	-	-	-
41	-	-	-	-	-	0.4	1.1	-	-	-	-	-
42	-	-	-	-	-	2.1	2.2	-	-	-	-	-
43	-	-	-	-	-	5.4	3.2	-	-	1.5	-	-
44	-	-	-	-	-	7.1	5.2	-	-	0.0	-	-
45	-	-	-	-	-	7.1	4.9	-	-	0.5	-	1.5
46	-	-	-	-	-	10.5	3.8	-	-	0.0	-	1.0
47	-	-	-	-	-	7.9	3.8	-	-	3.4	-	1.5
48	-	-	-	-	-	6.3	2.8	-	-	0.5	-	2.0
49	-	-	-	-	-	5.4	2.1	-	-	1.5	-	3.5
50	-	-	-	-	-	3.8	2.1	-	-	0.5	-	3.5
51	-	-	-	-	-	1.3	1.7	-	-	5.3	-	3.0
52	-	-	-	-	-	1.3	1.9	-	-	0.0	-	6.0
53	-	-	-	-	-	0.8	2.4	-	-	0.0	-	7.0
54	-	-	-	-	-	0.8	3.4	-	-	0.0	-	11.0
55	-	-	-	-	-	0.0	3.4	-	-	0.0	-	8.0
56	-	-	-	-	-	0.4	3.9	-	-	2.4	-	8.0
57	-	-	-	-	-	0.4	3.4	-	-	3.4	-	4.0
58	-	-	-	-	-	0.4	4.5	-	-	3.4	-	2.5
59	-	-	-	-	-	2.9	5.5	-	-	4.4	-	4.5
60	-	-	-	-	-	1.3	4.7	-	-	9.7	-	1.5
61	-	-	-	-	-	2.1	3.9	-	-	3.4	-	2.0
62	-	-	-	-	-	3.3	3.5	-	-	3.9	-	4.5
63	-	-	-	-	-	1.7	3.3	-	-	10.7	-	1.0
64	-	-	-	-	-	1.3	2.3	-	-	3.4	-	1.0
65	-	-	-	-	-	4.2	1.8	-	-	2.9	-	4.0
66	-	-	-	-	-	4.2	1.0	-	-	4.4	-	1.0
67	-	-	-	-	-	2.1	2.4	-	-	3.9	-	1.5
68	-	-	-	-	-	1.7	1.7	-	-	1.9	-	2.0
69	-	-	-	-	-	1.3	1.1	-	-	1.0	-	3.5
70	-	-	-	-	-	2.1	1.2	-	-	4.4	-	2.5
71	-	-	-	-	-	1.7	1.3	-	-	7.8	-	0.0
72	-	-	-	-	-	1.3	1.1	-	-	4.4	-	1.5
73	-	-	-	-	-	1.3	1.0	-	-	4.9	-	1.5
74	-	-	-	-	-	1.3	1.7	-	-	0.0	-	1.5
75	-	-	-	-	-	0.8	1.0	-	-	2.4	-	2.0
76	-	-	-	-	-	0.4	1.3	-	-	0.5	-	0.5
77	-	-	-	-	-	0.8	0.7	-	-	1.9	-	0.5
78	-	-	-	-	-	0.4	0.2	-	-	0.0	-	0.0
79	-	-	-	-	-	0.8	0.2	-	-	0.5	-	0.5
80	-	-	-	-	-	0.4	0.5	-	-	0.0	-	0.5
81	-	-	-	-	-	0.4	0.2	-	-	0.5	-	-
82	-	-	-	-	-	0.0	0.6	-	-	0.0	-	-
83	-	-	-	-	-	0.0	0.4	-	-	0.5	-	-
84	-	-	-	-	-	0.0	0.1	-	-	0.0	-	-
85	-	-	-	-	-	0.4	0.2	-	-	0.0	-	-
86	-	-	-	-	-	0.4	0.1	-	-	0.0	-	-
87	-	-	-	-	-	-	0.1	-	-	0.0	-	-
88	-	-	-	-	-	-	0.0	-	-	0.0	-	-
89	-	-	-	-	-	-	0.1	-	-	0.0	-	-
90	-	-	-	-	-	-	-	-	-	0.5	-	-
TOTAL	0	0	0	0	0	239	824	0	0	206	0	200

Table 7. Length-frequency distribution (in percent) of Pacific cod from Two Peaks-Butterworth, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
38	-	-	-	0.8	-	0.2	-	-	-	-	-	-
39	-	-	-	0.0	-	0.1	-	-	-	-	-	-
40	-	0.2	-	1.7	-	0.2	-	-	-	-	-	-
41	-	0.1	0.4	0.0	-	0.9	-	-	0.1	-	0.2	-
42	-	0.4	0.4	0.8	-	1.7	0.2	-	0.1	0.2	0.5	-
43	-	1.0	1.5	1.7	0.4	1.7	0.7	0.8	0.1	0.3	1.3	0.2
44	-	0.9	1.7	0.8	0.4	3.7	0.9	0.0	0.2	0.9	2.2	0.2
45	-	0.5	2.1	1.7	1.2	6.3	1.9	0.8	0.3	1.1	3.2	0.7
46	-	1.6	2.1	0.0	1.0	6.4	3.4	0.0	0.5	1.7	5.1	0.7
47	-	1.2	2.9	0.8	1.4	6.7	4.1	2.5	0.6	2.7	4.6	1.2
48	-	0.7	2.7	0.8	1.2	8.2	3.4	4.2	0.7	3.5	7.1	2.3
49	-	1.7	2.7	1.7	0.8	6.9	3.0	1.7	0.6	3.5	7.8	2.1
50	-	2.2	4.4	0.8	1.6	8.1	2.6	3.3	1.2	4.3	8.7	2.5
51	-	1.0	3.5	0.8	2.0	6.7	4.3	3.3	0.7	3.3	4.3	4.1
52	-	1.2	1.7	0.8	2.0	5.9	1.3	0.8	1.4	3.2	4.9	3.9
53	-	2.3	3.8	1.7	1.4	4.8	3.6	4.2	2.1	2.6	3.2	5.1
54	-	3.0	5.2	1.7	1.6	2.6	4.3	0.0	3.0	2.2	2.4	6.9
55	-	3.8	6.3	4.2	4.0	2.6	2.8	3.3	3.8	2.4	3.2	7.1
56	-	3.7	4.4	3.3	4.4	2.0	3.2	5.0	4.3	2.6	3.2	5.8
57	-	3.9	5.6	1.7	5.6	1.3	3.6	6.7	5.1	3.1	1.3	9.4
58	-	3.3	6.3	6.7	4.2	1.0	3.4	4.2	5.8	3.8	1.4	9.7
59	-	4.6	5.4	5.8	3.8	1.4	4.5	2.5	5.1	4.4	1.6	5.8
60	-	4.6	5.2	6.7	4.8	1.6	5.2	3.3	7.8	5.6	2.7	6.7
61	-	4.6	4.2	6.7	7.0	1.7	4.9	5.0	6.5	4.4	4.1	6.0
62	-	4.4	4.0	6.7	5.4	2.0	6.9	3.3	6.3	5.6	2.9	3.0
63	-	5.2	2.9	3.3	6.0	1.3	4.7	6.7	6.3	5.1	1.7	1.6
64	-	5.2	3.3	5.0	6.2	1.6	3.2	8.3	6.0	4.5	1.3	1.2
65	-	6.6	2.5	5.0	5.6	1.4	3.7	5.8	6.0	4.2	2.2	0.7
66	-	6.6	2.5	4.2	4.4	1.4	3.7	4.2	5.1	3.4	2.1	1.6
67	-	5.1	2.5	5.0	3.0	0.9	3.4	1.7	4.5	3.5	1.9	1.4
68	-	3.7	2.5	5.0	4.4	1.2	0.9	4.2	3.2	3.1	1.9	0.9
69	-	3.7	0.8	1.7	2.8	1.2	1.7	2.5	2.4	2.8	1.9	0.7
70	-	2.8	0.8	0.8	2.0	1.2	1.5	1.7	2.6	2.6	3.3	0.9
71	-	2.0	1.3	1.7	3.6	1.1	1.5	2.5	1.7	1.5	2.1	1.2
72	-	1.5	0.8	1.7	1.6	1.0	1.5	2.5	1.8	1.9	1.4	0.7
73	-	0.9	0.6	0.0	1.4	0.5	0.9	3.3	0.8	1.4	1.0	1.2
74	-	0.8	0.6	3.3	1.0	0.7	1.7	0.0	0.7	1.0	1.0	0.9
75	-	0.8	0.2	2.5	0.4	0.7	0.4	0.0	0.6	0.8	1.1	1.6
76	-	0.6	1.0	0.8	0.6	0.2	0.6	0.0	0.6	0.8	0.5	1.4
77	-	0.6	0.2	0.0	0.4	0.3	0.7	0.8	0.4	0.5	0.3	0.2
78	-	0.3	0.4	0.0	0.2	0.1	0.6	0.0	0.6	0.5	0.3	0.2
79	-	0.5	0.2	0.0	0.8	0.1	0.6	0.0	0.0	0.3	0.2	0.0
80	-	0.3	0.0	0.0	0.6	0.1	0.4	0.0	0.2	0.2	0.2	0.2
81	-	0.3	0.0	1.7	0.0	0.2	0.2	0.8	0.1	0.2	0.0	-
82	-	0.0	0.0	-	0.4	0.2	0.0	-	0.0	0.1	0.0	-
83	-	0.2	0.2	-	-	0.0	0.0	-	0.0	0.1	0.2	-
84	-	0.2	0.0	-	-	0.0	0.2	-	0.0	Tr	-	-
85	-	0.1	0.2	-	-	0.0	-	-	0.0	0.1	-	-
86	-	0.0	-	-	-	0.0	-	-	0.1	0.0	-	-
87	-	0.4	-	-	-	0.0	-	-	0.1	Tr	-	-
88	-	0.1	-	-	-	0.0	-	-	-	0.0	-	-
89	-	-	-	-	-	0.0	-	-	-	Tr	-	-
90	-	-	-	-	-	0.1	-	-	-	-	-	-
TOTAL	0	992	480	120	498	1201	535	120	1247	2910	631	434

Table 8. Length-frequency distribution (in percent) of Pacific cod from Two Peaks-Butterworth, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
32	-	-	-	0.1	-	-	-	-	-	-	-	-
33	-	-	-	0.0	-	-	-	-	-	-	-	-
34	-	-	-	0.0	-	-	-	-	-	-	-	-
35	-	-	-	0.0	-	-	-	-	-	-	-	-
36	-	-	-	0.0	-	-	-	-	-	-	-	-
37	-	-	-	0.2	-	-	-	-	-	-	-	-
38	-	-	-	0.1	-	-	-	0.4	-	-	-	-
39	-	-	-	0.2	-	-	-	0.0	0.1	-	-	-
40	0.4	-	-	0.6	0.4	0.1	-	0.4	0.1	-	-	-
41	0.0	-	0.2	0.7	0.6	0.1	-	0.4	0.0	-	0.1	0.1
42	0.4	-	0.2	1.0	0.8	0.3	0.8	1.3	0.1	-	0.2	0.1
43	0.2	-	0.0	2.2	0.8	0.5	0.0	3.4	0.4	-	0.6	0.1
44	1.3	-	0.5	3.3	1.5	1.0	2.5	2.5	0.2	0.2	1.2	1.1
45	1.9	-	0.2	4.3	1.0	1.9	2.5	7.1	0.4	0.0	1.8	1.0
46	3.2	-	1.6	4.4	1.7	2.1	4.2	2.5	0.3	0.8	1.6	0.2
47	3.3	0.8	2.6	5.6	0.6	2.5	5.1	8.0	0.5	0.8	3.5	0.4
48	5.7	2.5	3.5	5.3	0.4	4.2	5.9	5.5	1.2	1.1	4.1	0.6
49	5.6	0.8	3.3	5.5	0.6	4.1	6.8	6.3	1.7	1.1	5.2	0.9
50	4.9	2.5	3.7	6.4	1.9	5.1	3.4	8.4	2.1	1.7	5.1	1.3
51	5.2	0.8	3.0	5.0	1.0	4.8	5.1	4.2	2.1	1.5	5.1	1.3
52	4.3	4.2	3.0	4.8	1.7	6.2	6.4	5.5	2.4	1.6	4.7	2.3
53	3.7	1.7	5.6	5.0	2.1	4.8	4.2	3.8	3.7	1.3	3.6	1.8
54	3.9	0.8	4.0	5.0	1.9	5.1	5.5	2.1	3.4	2.0	3.7	3.3
55	2.6	2.5	5.2	4.4	2.3	5.1	5.5	2.1	4.0	1.5	3.8	4.1
56	1.6	4.2	6.1	3.6	2.7	5.0	3.8	3.4	4.3	2.2	3.8	4.0
57	1.6	0.8	4.7	3.6	3.1	4.1	4.7	4.2	3.9	2.3	3.5	4.3
58	3.2	2.5	4.0	3.2	2.7	4.6	3.4	2.9	4.1	2.9	4.1	6.2
59	3.3	6.7	4.2	2.3	2.7	3.2	1.3	1.3	5.2	2.1	5.4	6.5
60	1.9	3.3	4.9	2.4	3.3	2.6	2.1	1.7	6.0	3.5	4.5	7.1
61	2.4	2.5	6.1	2.5	2.5	2.0	3.8	1.3	4.9	3.7	4.4	4.4
62	1.8	7.5	4.4	2.0	5.2	1.3	4.2	0.8	5.2	5.5	3.6	4.7
63	2.8	2.5	3.0	2.2	5.2	1.3	2.1	1.7	3.6	6.2	4.6	4.1
64	3.0	5.8	4.0	2.4	6.7	2.6	2.5	2.5	5.0	6.7	3.4	3.1
65	2.8	1.7	2.6	2.2	6.1	1.3	3.0	1.3	4.6	6.6	2.7	3.3
66	3.4	5.8	1.6	1.3	4.4	1.8	0.8	1.3	5.4	6.2	2.7	4.3
67	4.1	1.7	2.3	2.2	3.5	1.8	1.3	1.3	4.2	5.7	2.5	5.6
68	3.5	4.2	1.4	0.6	5.2	2.6	1.7	1.7	3.5	4.9	1.5	6.2
69	2.4	2.5	0.7	1.1	3.3	2.1	0.4	1.7	3.0	4.2	1.5	4.4
70	3.0	5.0	2.1	0.8	3.1	2.8	0.4	1.7	3.7	4.9	1.6	3.5
71	2.7	1.7	2.1	0.9	2.9	2.0	0.8	2.9	2.0	4.3	1.2	2.6
72	1.8	4.2	1.2	0.5	3.8	1.8	2.1	0.4	2.2	3.5	0.7	1.3
73	0.9	1.7	1.2	0.7	3.5	2.0	0.0	0.4	1.8	2.1	0.8	2.1
74	2.1	4.2	1.2	0.3	2.7	1.5	0.4	0.4	1.0	2.8	0.4	2.2
75	0.9	2.5	0.7	0.3	1.9	1.4	0.4	0.4	0.9	1.7	0.7	0.4
76	0.9	1.7	1.9	0.2	1.7	0.7	0.8	0.0	0.7	2.0	0.4	0.4
77	0.7	0.0	0.7	0.3	0.8	0.5	0.4	0.8	0.6	0.4	0.5	0.2
78	0.4	0.8	0.2	0.2	1.0	0.8	0.0	0.8	0.4	0.8	0.3	0.2
79	0.5	0.8	0.2	0.1	0.4	0.4	0.4	0.4	0.4	0.7	0.1	0.0
80	0.5	3.3	0.2	0.1	0.6	0.7	0.8	0.4	0.4	0.2	0.3	0.0
81	0.2	1.7	0.0	0.1	0.0	0.1	-	0.0	0.1	0.2	0.0	0.0
82	0.1	0.8	0.5	0.2	0.4	0.2	-	0.4	0.1	0.2	0.1	0.0
83	0.2	0.0	0.5	0.1	0.2	0.2	-	-	0.0	0.0	0.1	0.1
84	0.2	1.7	0.0	0.1	0.2	0.2	-	-	0.1	0.0	0.1	-
85	0.0	0.8	0.0	0.0	0.4	0.1	-	-	0.1	0.1	-	-
86	0.1	0.0	0.0	0.1	-	0.1	-	-	0.1	-	-	-
87	0.2	0.8	0.0	0.0	-	0.2	-	-	0.0	-	-	-
88	-	-	0.2	0.0	-	0.1	-	-	0.0	-	-	-
89	-	-	0.2	0.1	-	-	-	-	0.0	-	-	-
90	-	-	-	-	-	-	-	-	0.0	-	-	-
91	-	-	-	-	-	-	-	-	0.0	-	-	-
92	-	-	-	-	-	-	-	-	0.0	-	-	-
93	-	-	-	-	-	-	-	-	0.0	-	-	-
94	-	-	-	-	-	-	-	-	0.1	-	-	-
TOTAL	821	120	427	1904	479	1321	236	238	1455	923	1640	907

Table 9. Length-frequency distribution (in percent) of Pacific cod from White Rocks-Bonilla, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
23	-	-	-	-	-	0.1	-	-	-	-	-	-
24	-	-	-	-	-	0.1	-	-	-	-	-	-
25	-	-	-	-	-	0.1	-	-	-	-	-	-
26	-	-	-	-	-	0.0	-	-	-	-	-	-
27	-	-	-	-	-	0.1	-	-	-	-	-	-
28	-	-	-	-	-	0.3	-	-	-	-	-	-
29	-	-	-	-	-	0.1	-	-	-	-	-	-
30	-	-	-	-	-	0.1	-	-	-	-	-	-
31	-	-	-	-	-	0.1	-	-	-	-	-	-
32	-	-	-	-	-	0.0	-	-	-	-	-	-
33	-	-	-	-	-	0.2	-	-	-	-	-	-
34	-	-	-	-	-	0.2	-	-	-	-	-	-
35	-	-	-	-	-	0.3	-	-	-	-	-	-
36	-	-	-	-	-	0.3	0.1	-	0.1	-	-	-
37	-	-	-	0.2	-	0.3	Tr	-	0.0	-	-	-
38	-	-	-	0.0	0.2	0.9	0.1	-	0.1	-	-	-
39	-	-	-	0.2	0.0	0.7	0.3	-	0.1	-	-	-
40	-	0.1	0.2	1.0	0.0	1.0	0.5	-	0.6	-	-	-
41	-	0.1	0.3	1.5	0.2	2.2	0.7	-	1.0	0.1	-	0.1
42	0.5	0.2	0.1	1.5	0.8	3.4	1.3	-	1.7	0.1	0.1	0.2
43	1.0	0.4	0.2	1.5	1.7	2.7	1.6	-	2.0	0.5	0.2	0.5
44	1.0	0.7	0.2	2.7	1.7	4.8	1.8	-	2.5	0.4	0.4	1.1
45	1.0	1.3	0.9	3.2	2.3	4.6	2.0	-	1.8	0.4	0.6	0.5
46	2.6	1.2	0.7	2.9	3.4	4.1	2.2	-	2.5	0.5	0.3	1.3
47	3.6	1.7	0.7	3.6	4.7	2.9	3.1	-	3.5	0.5	0.4	0.8
48	3.1	2.5	1.8	4.4	5.3	2.5	3.5	-	3.6	1.3	1.1	2.1
49	3.1	2.8	3.0	2.7	6.1	1.6	3.8	-	3.0	1.1	0.6	2.2
50	4.1	3.3	4.7	4.6	7.2	1.6	5.4	-	4.2	2.2	1.0	2.9
51	5.7	5.0	4.7	3.2	7.4	1.0	5.5	-	5.1	1.5	0.9	1.6
52	4.1	5.9	5.1	3.2	6.1	0.8	5.3	-	5.9	1.0	0.8	2.5
53	4.1	6.5	5.7	3.4	5.5	1.0	6.0	-	6.9	1.3	1.5	2.7
54	5.2	6.3	7.5	2.2	5.7	0.8	5.3	-	6.1	2.4	2.5	3.3
55	6.2	6.3	7.1	4.4	5.3	1.7	5.4	-	7.0	3.5	1.8	3.9
56	7.8	6.6	5.7	3.4	4.4	2.0	5.0	-	4.1	3.7	2.6	4.8
57	4.1	5.5	6.0	5.6	3.2	2.3	4.6	-	4.3	4.4	3.2	2.8
58	3.6	5.2	4.7	5.1	3.0	1.7	4.3	-	4.3	4.8	2.8	4.2
59	4.1	4.4	4.9	5.1	2.3	3.3	4.3	-	1.7	6.6	4.7	5.1
60	2.6	3.5	3.7	6.3	3.0	4.2	4.4	-	2.3	6.3	6.5	6.5
61	2.6	4.5	3.3	6.8	2.3	3.1	3.0	-	2.8	5.1	5.0	4.4
62	5.2	3.7	2.7	3.2	3.2	3.1	2.7	-	1.8	4.9	6.0	4.8
63	4.7	2.7	3.3	2.7	3.2	3.4	2.1	-	2.5	5.1	3.5	2.7
64	2.6	1.8	2.9	3.2	1.5	5.8	2.3	-	2.4	7.4	5.5	3.4
65	3.6	2.6	3.5	2.4	1.7	5.4	1.4	-	1.6	4.9	5.9	3.8
66	3.6	1.4	1.6	1.5	1.7	4.5	1.6	-	1.4	4.7	6.3	3.8
67	2.1	1.6	1.7	1.7	1.3	3.3	1.2	-	1.7	5.3	5.9	4.8
68	1.6	1.7	1.8	1.0	1.1	2.8	1.1	-	2.3	3.0	4.5	5.3
69	1.6	1.4	1.7	0.7	0.6	3.3	1.2	-	2.0	2.4	2.4	3.6
70	1.0	1.6	1.4	1.2	0.8	2.3	0.9	-	1.2	3.1	4.7	2.5
71	1.0	1.3	1.0	1.2	0.4	1.6	0.7	-	1.4	1.8	3.3	2.1
72	0.5	0.7	0.4	0.2	0.6	2.0	0.8	-	0.8	3.0	2.5	1.3
73	1.0	0.7	1.2	0.5	0.0	1.1	0.5	-	1.2	1.8	4.2	1.2
74	0.0	0.6	0.7	1.0	1.1	0.8	0.8	-	0.7	0.9	2.2	1.1
75	0.0	0.8	1.1	0.5	0.0	0.8	0.7	-	0.5	0.8	1.4	2.5
76	0.5	0.4	0.8	0.0	0.2	0.6	0.3	-	0.4	1.2	1.2	0.7
77	0.0	0.5	0.7	0.2	0.0	0.2	0.3	-	0.4	0.6	1.4	0.4
78	0.0	0.5	0.3	0.2	0.0	0.3	0.3	-	0.0	0.6	0.4	1.1
79	0.0	0.3	0.4	-	0.4	0.4	0.3	-	0.0	0.2	0.1	0.2
80	0.0	0.4	0.1	-	0.0	0.6	0.3	-	0.1	0.4	0.5	0.5
81	0.0	0.1	0.3	-	0.0	0.0	0.3	-	0.0	0.1	0.4	0.1
82	0.0	0.1	0.2	-	0.0	0.0	Tr	-	0.2	0.1	0.5	0.0
83	0.0	0.2	0.1	-	0.2	0.0	0.1	-	-	0.1	0.0	0.0
84	0.0	0.2	0.0	-	-	0.2	0.1	-	-	-	0.0	0.2
85	0.0	0.3	0.0	-	-	-	0.1	-	-	-	0.0	0.1
86	0.0	0.1	0.2	-	-	-	0.0	-	-	-	0.2	-
87	0.0	0.1	0.0	-	-	-	0.1	-	-	-	0.0	-
88	0.0	0.0	0.0	-	-	-	0.0	-	-	-	0.0	-
89	0.0	0.1	0.0	-	-	-	0.0	-	-	-	0.1	-

Table 9 (cont'd)

90	0.0	0.1	0.1	-	-	-	0.0	-	-	-	-	-
91	0.0	0.0	-	-	-	-	0.0	-	-	-	-	-
92	0.5	0.0	-	-	-	-	Tr	-	-	-	-	-
93	-	0.0	-	-	-	-	-	-	-	-	-	-
94	-	0.0	-	-	-	-	-	-	-	-	-	-
95	-	0.0	-	-	-	-	-	-	-	-	-	-
96	-	0.0	-	-	-	-	-	-	-	-	-	-
97	-	0.1	-	-	-	-	-	-	-	-	-	-
TOTAL	193	1935	974	411	472	962	2323	0	831	1617	1406	825

Table 10. Length-frequency distribution (in percent) of Pacific cod from White Rocks-Bonilla, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
26	-	-	-	-	0.6	-	-	-	-	-	-	-
27	-	-	-	-	0.0	-	-	-	-	-	-	-
28	-	-	-	-	0.0	-	-	-	-	-	-	-
29	-	-	-	-	0.6	-	-	-	-	-	-	-
30	-	-	-	-	0.3	-	-	-	-	-	-	-
31	-	-	-	-	0.6	-	-	-	-	-	-	-
32	-	-	-	-	0.0	-	-	-	-	-	-	-
33	-	-	-	-	0.0	-	-	-	-	-	-	-
34	-	-	-	-	0.0	-	-	-	-	-	-	-
35	-	-	-	-	0.0	-	-	-	-	-	-	-
36	-	-	-	-	0.0	-	-	-	-	-	-	-
37	-	-	-	-	0.0	-	-	-	-	-	-	-
38	-	-	-	-	0.3	-	-	-	-	-	0.2	-
39	-	-	-	-	0.0	0.4	-	-	-	-	0.2	-
40	-	-	-	-	0.3	0.0	-	-	-	-	0.2	-
41	-	-	-	-	0.0	0.4	2.5	-	-	-	0.2	-
42	-	-	-	-	0.0	0.4	0.8	-	-	0.3	0.7	-
43	-	-	-	-	0.6	1.6	5.0	-	-	0.3	1.5	-
44	-	-	-	-	1.1	2.7	1.7	-	-	0.3	1.5	-
45	-	-	-	-	0.6	4.3	0.8	-	-	0.3	2.3	0.4
46	-	-	-	-	3.1	5.9	2.5	-	1.4	0.3	2.2	0.4
47	-	-	-	-	2.3	6.3	5.0	-	0.9	0.9	2.6	1.0
48	-	-	-	-	1.7	2.3	3.3	-	2.3	3.5	2.9	0.6
49	-	-	-	-	2.3	3.1	1.7	-	2.8	1.5	2.4	1.0
50	-	-	-	-	5.1	2.3	2.5	-	4.1	2.1	3.1	2.1
51	-	-	-	-	4.2	0.8	4.2	-	2.8	1.8	2.3	1.5
52	-	-	-	-	7.1	0.4	1.7	-	4.1	1.2	1.4	1.9
53	-	-	-	-	5.7	2.7	6.7	-	8.8	2.4	1.4	2.7
54	-	-	-	-	5.9	1.2	3.3	-	6.0	2.1	2.3	2.9
55	-	-	-	-	6.5	3.9	6.7	-	3.7	1.8	2.4	2.9
56	-	-	-	-	3.1	2.0	5.0	-	6.9	3.8	3.4	3.5
57	-	-	-	-	5.7	1.6	11.7	-	4.6	2.9	3.4	4.1
58	-	-	-	-	5.9	3.9	8.3	-	4.6	3.8	3.9	2.3
59	-	-	-	-	4.2	4.7	1.7	-	7.4	5.6	5.2	4.4
60	-	-	-	-	5.7	5.5	1.7	-	8.8	5.3	6.6	7.7
61	-	-	-	-	4.2	3.9	5.0	-	3.7	3.5	5.3	7.1
62	-	-	-	-	3.1	6.6	5.0	-	5.1	6.5	4.2	6.4
63	-	-	-	-	4.5	6.3	0.0	-	2.8	7.4	4.6	5.6
64	-	-	-	-	4.2	4.3	1.7	-	3.7	5.3	4.1	3.3
65	-	-	-	-	2.3	5.5	1.7	-	3.2	5.0	4.0	2.3
66	-	-	-	-	2.3	2.3	0.8	-	4.1	7.4	4.2	3.1
67	-	-	-	-	0.8	0.8	0.8	-	1.8	3.2	4.4	3.1
68	-	-	-	-	1.7	3.9	0.8	-	1.8	4.4	3.3	3.9
69	-	-	-	-	1.4	2.7	1.7	-	1.4	4.4	1.9	4.1
70	-	-	-	-	0.8	1.6	0.8	-	0.5	2.7	3.3	5.4
71	-	-	-	-	0.3	1.2	0.0	-	0.5	1.8	2.6	5.0
72	-	-	-	-	0.3	0.8	1.7	-	0.0	2.4	1.9	3.7
73	-	-	-	-	0.0	1.2	0.0	-	0.9	2.1	0.4	1.7
74	-	-	-	-	0.0	0.8	1.7	-	0.5	1.5	1.4	1.7
75	-	-	-	-	0.0	0.8	0.8	-	0.5	0.9	0.8	0.6
76	-	-	-	-	0.0	0.4	0.0	-	0.5	0.3	1.0	1.5
77	-	-	-	-	0.0	0.0	0.0	-	-	0.3	0.1	1.0
78	-	-	-	-	0.3	0.0	0.0	-	-	0.0	0.2	0.4
79	-	-	-	-	0.0	0.4	0.8	-	-	0.6	0.0	0.4
80	-	-	-	-	0.0	0.0	-	-	-	0.3	0.0	0.2
81	-	-	-	-	0.3	0.0	-	-	-	-	0.1	-
82	-	-	-	-	-	0.0	-	-	-	-	-	-
83	-	-	-	-	-	0.0	-	-	-	-	-	-
84	-	-	-	-	-	0.0	-	-	-	-	-	-
85	-	-	-	-	-	0.0	-	-	-	-	-	-
86	-	-	-	-	-	0.4	-	-	-	-	-	-
TOTAL	0	0	0	0	353	256	120	0	217	339	1292	482

Table 11. Length-frequency distribution (in percent) of Pacific cod from White Rocks-Bonilla, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
39	-	-	-	0.3	-	-	-	-	-	-	-	-
40	-	-	-	0.8	-	-	-	-	-	-	-	-
41	-	-	-	2.3	-	-	-	0.4	-	-	-	-
42	-	-	-	0.0	-	0.8	-	0.4	-	-	-	-
43	-	-	-	3.1	-	0.8	-	2.1	-	-	-	-
44	-	-	-	3.4	0.2	0.8	-	5.0	-	-	-	-
45	-	-	-	5.6	0.0	1.7	-	2.5	-	-	-	-
46	-	-	-	6.2	0.0	2.5	-	8.8	-	-	-	-
47	-	-	-	5.6	0.4	6.7	-	5.4	-	-	-	-
48	-	-	-	3.4	0.0	6.7	-	6.7	-	-	-	-
49	-	-	-	4.5	0.6	3.3	-	6.7	-	-	-	-
50	-	-	-	6.2	1.0	5.0	-	6.7	-	-	-	-
51	-	-	-	4.5	2.1	6.7	-	4.2	-	-	-	-
52	-	-	-	5.1	3.1	9.2	-	8.8	-	-	-	-
53	-	-	-	3.1	1.9	5.8	-	7.5	-	-	-	-
54	-	-	-	4.8	2.3	6.7	-	5.0	-	-	-	-
55	-	-	-	4.8	4.0	3.3	-	2.1	-	-	-	-
56	-	-	-	3.7	5.0	4.2	-	4.6	-	-	-	-
57	-	-	-	2.3	3.3	0.8	-	5.0	-	-	-	-
58	-	-	-	2.0	5.9	2.5	-	2.5	-	-	-	-
59	-	-	-	3.1	5.9	1.7	-	1.7	-	-	-	-
60	-	-	-	2.0	8.4	0.8	-	3.8	-	-	-	-
61	-	-	-	1.7	5.9	1.7	-	0.8	-	-	-	-
62	-	-	-	4.0	5.0	0.8	-	2.5	-	-	-	-
63	-	-	-	2.0	4.8	1.7	-	1.3	-	-	-	-
64	-	-	-	3.1	4.2	2.5	-	1.3	-	-	-	-
65	-	-	-	1.4	6.9	0.8	-	1.3	-	-	-	-
66	-	-	-	1.7	4.4	1.7	-	0.0	-	-	-	-
67	-	-	-	1.1	5.0	0.8	-	1.7	-	-	-	-
68	-	-	-	2.0	4.4	4.2	-	0.4	-	-	-	-
69	-	-	-	0.8	2.9	1.7	-	0.0	-	-	-	-
70	-	-	-	0.3	2.1	4.2	-	0.0	-	-	-	-
71	-	-	-	0.6	2.5	1.7	-	0.4	-	-	-	-
72	-	-	-	1.4	2.7	1.7	-	0.0	-	-	-	-
73	-	-	-	0.6	1.0	3.3	-	0.0	-	-	-	-
74	-	-	-	0.0	0.2	0.0	-	0.4	-	-	-	-
75	-	-	-	0.6	1.0	0.8	-	0.0	-	-	-	-
76	-	-	-	0.6	0.6	0.0	-	0.0	-	-	-	-
77	-	-	-	0.6	0.4	0.8	-	0.0	-	-	-	-
78	-	-	-	0.0	0.2	0.8	-	0.4	-	-	-	-
79	-	-	-	0.0	0.6	0.8	-	-	-	-	-	-
80	-	-	-	0.6	0.4	-	-	-	-	-	-	-
81	-	-	-	0.3	0.0	-	-	-	-	-	-	-
82	-	-	-	-	0.2	-	-	-	-	-	-	-
83	-	-	-	-	0.0	-	-	-	-	-	-	-
84	-	-	-	-	0.0	-	-	-	-	-	-	-
85	-	-	-	-	0.0	-	-	-	-	-	-	-
86	-	-	-	-	0.2	-	-	-	-	-	-	-
TOTAL	0	0	0	354	478	120	0	240	0	0	0	0

Table 12. Length-frequency distribution (in percent) of Pacific cod from White Rocks-Bonilla, October-December, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
32	-	-	-	0.1	-	-	-	-	-	-	-	-
33	-	-	-	0.0	-	-	-	-	-	-	-	-
34	-	-	-	0.0	-	-	-	-	-	-	-	-
35	-	-	-	0.0	0.3	-	-	-	-	-	-	-
36	-	-	-	0.1	0.1	0.2	-	-	-	-	-	-
37	-	-	-	0.1	0.5	0.0	-	0.8	-	-	-	-
38	-	-	-	0.4	1.1	0.0	-	0.8	-	-	-	-
39	0.1	-	-	0.7	0.5	0.0	-	0.0	-	-	0.1	-
40	0.0	-	-	0.3	1.6	0.2	1.7	1.7	-	-	0.2	-
41	0.2	0.3	0.7	1.3	1.5	0.2	0.8	1.7	0.4	-	0.2	-
42	0.2	0.3	0.2	3.5	1.3	0.0	0.8	8.3	0.0	-	0.6	-
43	0.1	0.5	0.7	3.3	0.9	0.4	1.7	2.5	0.9	-	1.0	-
44	0.2	0.7	0.0	4.6	1.8	1.2	0.8	2.5	0.9	-	2.2	-
45	0.3	0.1	0.9	6.3	0.6	1.2	1.7	6.7	0.0	-	3.3	-
46	0.5	2.2	1.8	6.8	1.0	2.9	2.5	5.0	1.8	-	4.4	-
47	1.6	3.5	2.0	6.3	0.4	5.6	1.7	5.8	1.3	-	2.4	-
48	1.7	4.7	2.4	5.7	0.8	6.2	4.2	7.5	0.0	-	4.2	-
49	3.2	6.7	3.1	7.4	0.6	6.6	2.5	7.5	0.4	-	4.0	-
50	4.3	9.9	2.6	6.7	0.6	7.2	4.2	6.7	6.1	-	6.3	-
51	4.5	8.5	2.2	5.7	1.0	7.6	1.7	3.3	1.3	-	5.7	-
52	5.5	7.6	2.8	4.6	2.6	7.2	4.2	5.0	3.1	-	5.0	-
53	6.3	6.5	3.7	4.3	1.3	5.1	3.3	5.0	4.8	-	3.7	-
54	5.5	5.0	2.2	4.3	1.8	4.5	2.5	0.8	5.7	-	4.7	-
55	6.0	5.3	4.6	2.6	2.5	3.5	3.3	1.7	3.5	-	4.4	-
56	6.1	3.5	3.3	2.9	3.4	5.1	5.8	1.7	9.2	-	3.3	-
57	5.9	4.2	4.4	1.9	4.1	3.5	4.2	0.0	7.9	-	2.8	-
58	3.7	3.5	3.9	2.1	3.8	3.3	9.2	3.3	4.8	-	4.4	-
59	4.0	1.9	4.2	2.2	4.9	1.2	7.5	4.2	3.5	-	3.5	-
60	3.1	4.2	3.1	1.9	7.0	1.8	3.3	5.8	9.2	-	4.3	-
61	3.2	3.2	4.4	1.5	5.5	1.4	4.2	0.0	4.8	-	4.2	-
62	2.9	1.5	3.9	1.8	4.6	1.2	2.5	2.5	4.4	-	4.6	-
63	3.3	1.8	3.7	2.1	6.1	1.0	5.8	0.8	6.6	-	4.1	-
64	3.3	1.5	3.3	1.4	5.1	1.2	5.0	0.0	2.6	-	2.3	-
65	3.7	1.3	4.2	1.0	5.8	1.6	2.5	0.8	7.5	-	2.1	-
66	2.2	1.3	3.7	0.6	4.1	1.0	1.7	1.7	1.8	-	1.4	-
67	2.7	1.2	3.7	0.8	4.3	1.6	3.3	0.0	3.5	-	1.8	-
68	2.2	1.3	3.7	1.0	3.1	2.1	2.5	0.0	1.8	-	1.3	-
69	2.6	1.1	4.4	1.1	2.8	2.3	0.8	0.8	1.3	-	1.4	-
70	1.9	1.1	2.0	0.4	3.3	1.8	0.0	0.8	0.9	-	1.8	-
71	1.8	1.3	1.8	0.1	1.6	1.0	0.8	0.8	-	-	1.4	-
72	1.7	1.6	1.5	0.1	1.6	1.6	0.8	0.8	-	-	0.6	-
73	1.2	0.5	1.1	0.3	1.1	1.4	0.0	0.8	-	-	0.5	-
74	1.1	0.7	2.4	0.1	0.4	1.4	0.8	0.8	-	-	0.6	-
75	1.1	0.3	1.5	0.1	1.6	1.0	0.0	0.0	-	-	0.4	-
76	0.5	0.5	0.4	0.0	0.5	1.4	0.0	0.8	-	-	0.3	-
77	0.5	0.1	0.9	0.1	0.5	1.2	1.7	-	-	-	0.4	-
78	0.3	0.0	0.7	0.3	0.3	0.6	-	-	-	-	0.2	-
79	0.3	0.3	1.1	0.4	0.4	0.4	-	-	-	-	0.1	-
80	0.4	0.0	1.1	0.1	0.6	0.2	-	-	-	-	0.1	-
81	0.0	0.1	0.2	0.1	0.1	0.0	-	-	-	-	-	-
82	0.0	0.0	0.0	0.1	0.0	0.6	-	-	-	-	-	-
83	0.2	0.0	0.7	-	0.1	-	-	-	-	-	-	-
84	0.0	0.0	0.4	-	0.3	-	-	-	-	-	-	-
85	0.1	0.0	0.2	-	0.0	-	-	-	-	-	-	-
86	0.0	0.1	0.0	-	0.1	-	-	-	-	-	-	-
87	0.0	-	0.2	-	-	-	-	-	-	-	-	-
88	0.0	-	0.0	-	-	-	-	-	-	-	-	-
89	0.0	-	0.2	-	-	-	-	-	-	-	-	-
90	0.0	-	-	-	-	-	-	-	-	-	-	-
91	0.1	-	-	-	-	-	-	-	-	-	-	-
92	0.0	-	-	-	-	-	-	-	-	-	-	-
93	0.1	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1319	741	457	719	797	514	120	120	228	0	1259	0

Table 13. Length-frequency distribution (in percent) of Pacific cod from Area 5A, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
33	-	-	-	-	0.2	-	-	-	-	-	-	-
34	-	-	-	-	0.0	0.1	-	-	-	-	-	-
35	-	-	-	-	0.0	0.0	-	-	-	-	-	-
36	-	-	-	-	0.1	0.0	-	-	-	-	-	-
37	-	-	-	-	0.2	0.0	-	-	-	-	-	-
38	-	-	-	0.3	0.1	0.0	0.3	-	-	-	-	-
39	-	-	-	0.2	0.0	0.0	0.0	-	0.1	-	-	-
40	-	-	0.2	0.4	0.1	0.0	0.3	-	0.0	-	-	-
41	-	-	0.4	1.0	0.1	0.0	0.8	-	0.3	-	-	-
42	-	-	1.6	2.3	0.6	0.3	0.3	1.7	0.5	-	-	-
43	-	-	0.7	2.1	0.8	0.4	1.4	2.5	1.0	-	-	-
44	-	-	2.9	2.7	1.5	1.5	3.1	1.7	2.5	-	-	-
45	0.3	-	2.4	4.2	1.9	3.6	4.7	3.3	3.2	-	-	-
46	0.9	-	5.3	5.5	3.3	5.2	6.7	1.7	3.6	-	-	-
47	1.5	-	4.7	5.2	3.6	9.3	7.5	5.8	4.1	-	-	-
48	4.0	-	5.3	6.1	2.5	8.6	7.5	8.3	5.3	-	-	-
49	4.3	-	3.3	5.9	3.5	10.3	5.6	5.0	5.7	-	-	-
50	5.0	-	3.6	6.5	4.5	9.3	6.4	5.8	5.6	-	-	-
51	3.7	-	6.9	4.3	3.8	7.3	5.0	9.2	6.7	-	-	-
52	2.2	-	5.3	3.9	5.3	6.1	5.3	8.3	5.8	-	-	-
53	5.0	-	3.8	4.8	6.4	7.7	3.6	9.2	5.5	-	-	-
54	2.5	-	7.1	3.2	6.1	5.4	5.0	4.2	7.2	-	-	-
55	2.5	-	5.1	3.2	6.4	4.2	3.6	7.5	7.1	-	-	-
56	2.8	-	4.0	4.6	6.1	2.8	4.2	5.8	6.4	-	-	-
57	2.2	-	4.9	3.0	5.7	2.6	3.1	4.2	4.2	-	-	-
58	3.7	-	3.1	2.9	5.2	2.3	3.9	4.2	5.2	-	-	-
59	6.5	-	4.4	3.8	4.2	1.9	2.5	5.0	4.3	-	-	-
60	5.9	-	4.7	2.8	5.5	1.7	2.5	0.8	4.1	-	-	-
61	5.0	-	4.7	3.4	4.5	1.0	3.6	2.5	2.4	-	-	-
62	6.8	-	2.2	2.3	3.4	1.7	2.8	0.0	1.8	-	-	-
63	4.3	-	1.8	2.1	2.6	1.9	3.1	1.7	1.6	-	-	-
64	4.3	-	1.8	2.4	2.1	1.2	2.5	0.8	1.1	-	-	-
65	6.2	-	1.8	2.1	2.0	0.9	1.1	0.0	1.1	-	-	-
66	2.5	-	1.6	1.8	1.8	0.3	0.6	0.0	0.6	-	-	-
67	1.5	-	0.7	1.2	1.1	0.9	0.6	0.8	0.9	-	-	-
68	4.0	-	0.2	1.0	0.7	0.1	0.6	-	0.9	-	-	-
69	0.9	-	0.7	0.7	0.9	0.3	0.8	-	0.2	-	-	-
70	2.2	-	0.2	1.3	0.7	0.1	0.0	-	0.1	-	-	-
71	1.2	-	1.3	0.8	0.7	0.0	0.0	-	0.3	-	-	-
72	1.9	-	0.7	0.7	0.2	0.3	0.0	-	0.1	-	-	-
73	1.9	-	0.0	0.0	0.3	0.3	0.6	-	0.1	-	-	-
74	1.2	-	0.4	0.4	0.1	0.1	0.0	-	0.0	-	-	-
75	0.6	-	0.4	0.2	0.1	0.3	0.3	-	0.0	-	-	-
76	0.6	-	0.2	0.3	0.6	-	0.0	-	0.0	-	-	-
77	0.3	-	0.4	0.0	0.1	-	0.0	-	0.0	-	-	-
78	0.6	-	0.0	0.0	0.0	-	0.3	-	0.1	-	-	-
79	0.3	-	0.7	0.2	0.0	-	0.3	-	-	-	-	-
80	0.0	-	0.0	0.0	0.2	-	-	-	-	-	-	-
81	0.3	-	0.0	0.1	-	-	-	-	-	-	-	-
82	0.0	-	0.0	0.0	-	-	-	-	-	-	-	-
83	0.3	-	0.2	0.0	-	-	-	-	-	-	-	-
84	-	-	0.2	0.0	-	-	-	-	-	-	-	-
85	-	-	-	0.0	-	-	-	-	-	-	-	-
86	-	-	-	0.1	-	-	-	-	-	-	-	-
TOTAL	323	0	450	920	1210	689	360	120	967	0	0	0

Table 14. Length-frequency distribution (in percent) of Pacific cod from Area 5A, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
38	-	-	0.4	0.9	-	-	-	-	-	-	-	-
39	-	-	0.4	0.5	-	0.8	-	-	-	-	-	-
40	0.2	-	0.8	1.8	0.8	0.0	-	-	-	-	-	-
41	0.0	-	0.0	1.8	0.0	0.8	-	-	0.5	-	-	0.2
42	0.2	-	0.4	3.7	0.4	0.0	-	-	2.7	-	-	0.0
43	0.2	-	1.6	3.2	0.8	0.8	-	-	3.8	-	-	0.0
44	1.4	-	2.2	3.7	1.6	0.0	-	-	2.7	-	-	0.0
45	1.6	-	3.9	7.8	2.8	0.8	-	-	3.8	-	-	0.5
46	2.3	-	5.3	4.6	4.0	1.7	-	-	4.3	-	-	0.2
47	5.6	-	4.3	7.3	0.8	0.8	-	-	5.9	-	-	2.1
48	5.4	-	7.2	7.8	1.6	2.5	-	-	4.8	-	-	1.1
49	6.5	-	5.3	6.4	5.2	5.0	-	-	6.5	-	-	1.8
50	8.9	-	5.7	7.3	5.6	5.0	-	-	4.3	-	-	3.0
51	5.6	-	5.7	5.5	2.4	8.3	-	-	5.9	-	-	2.7
52	6.8	-	6.1	5.5	2.4	8.3	-	-	4.3	-	-	3.2
53	8.9	-	4.1	1.8	4.4	4.2	-	-	5.4	-	-	2.7
54	4.2	-	4.7	3.2	5.2	4.2	-	-	5.9	-	-	5.5
55	4.7	-	5.9	6.0	5.6	7.5	-	-	4.8	-	-	5.5
56	4.2	-	3.9	2.3	4.8	8.3	-	-	4.8	-	-	5.3
57	2.6	-	6.7	4.6	5.6	7.5	-	-	2.7	-	-	5.0
58	2.3	-	4.1	1.8	4.8	7.5	-	-	4.3	-	-	5.3
59	3.0	-	4.5	2.3	4.0	5.8	-	-	4.3	-	-	5.9
60	0.7	-	2.9	1.4	4.0	3.3	-	-	3.8	-	-	7.8
61	2.3	-	2.9	1.4	6.5	2.5	-	-	3.2	-	-	7.1
62	2.8	-	2.5	1.8	5.6	4.2	-	-	3.2	-	-	6.2
63	2.8	-	1.8	0.0	4.8	2.5	-	-	2.7	-	-	5.5
64	2.6	-	2.7	0.9	2.0	3.3	-	-	0.5	-	-	3.4
65	2.3	-	0.8	0.0	4.4	0.8	-	-	1.1	-	-	4.3
66	1.4	-	0.8	1.8	2.8	0.8	-	-	1.6	-	-	4.6
67	2.3	-	0.4	0.5	0.4	0.0	-	-	0.5	-	-	3.7
68	1.6	-	0.6	0.0	0.8	0.8	-	-	0.0	-	-	2.5
69	1.2	-	0.0	0.0	1.2	0.0	-	-	0.0	-	-	0.9
70	1.9	-	0.4	0.5	0.8	0.0	-	-	0.5	-	-	1.8
71	0.9	-	0.2	0.9	1.2	0.0	-	-	0.5	-	-	0.2
72	0.5	-	0.0	0.5	0.4	0.0	-	-	0.0	-	-	0.2
73	0.5	-	0.2	0.0	0.4	0.8	-	-	0.0	-	-	0.2
74	0.0	-	0.0	0.0	0.0	0.8	-	-	0.5	-	-	0.5
75	0.7	-	0.2	0.0	0.0	-	-	-	-	-	-	0.2
76	0.2	-	0.0	0.0	0.4	-	-	-	-	-	-	0.0
77	0.2	-	0.0	0.5	0.0	-	-	-	-	-	-	0.2
78	0.0	-	0.0	-	0.4	-	-	-	-	-	-	0.2
79	0.2	-	0.2	-	0.0	-	-	-	-	-	-	0.0
80	-	-	-	-	0.4	-	-	-	-	-	-	0.2
TOTAL	428	0	489	218	248	120	0	0	186	0	0	437

Table 15. Length-frequency distribution (in percent) of Pacific cod from Area 5B, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
36	-	-	-	-	0.3	-	-	-	-	-	-	-
37	-	-	-	-	0.5	-	-	-	-	-	-	-
38	-	-	-	-	0.8	-	-	-	-	-	-	-
39	-	-	-	0.2	0.0	-	-	-	-	-	-	-
40	-	1.1	0.7	0.0	0.0	-	-	-	0.3	-	-	-
41	-	0.5	0.0	0.0	0.3	-	-	-	0.5	-	-	-
42	-	2.1	0.0	0.9	0.0	-	0.5	-	0.2	-	-	-
43	-	2.1	0.7	2.1	0.0	-	1.3	-	0.0	-	-	-
44	-	2.6	4.1	3.0	0.8	1.3	1.3	-	0.9	-	-	-
45	-	4.7	6.1	4.1	0.3	0.8	1.3	-	1.1	0.8	-	-
46	-	3.7	1.4	8.1	1.5	0.8	2.9	-	0.8	2.4	-	-
47	-	7.4	2.0	7.1	0.8	0.8	1.6	-	1.7	3.1	-	-
48	-	5.3	6.8	8.1	0.8	1.3	1.8	-	1.5	2.4	-	-
49	-	6.1	2.7	4.9	1.8	1.7	4.4	-	1.1	0.8	-	-
50	-	6.6	4.1	6.2	1.8	1.7	3.4	-	2.0	3.9	-	-
51	-	3.2	4.1	5.4	3.8	3.8	2.6	-	2.4	0.8	-	-
52	-	4.2	4.1	5.8	3.8	3.3	1.6	-	2.4	0.0	-	-
53	-	3.2	2.7	3.4	4.3	3.8	2.1	-	3.0	3.1	-	-
54	-	3.4	2.0	3.0	4.3	4.2	3.1	-	3.9	3.9	-	-
55	-	4.7	4.8	1.9	6.1	5.0	4.2	-	3.5	3.9	-	-
56	-	4.5	6.8	3.0	7.9	2.1	3.1	-	5.2	6.3	-	-
57	-	4.2	4.1	2.6	6.4	2.1	2.9	-	5.6	4.7	-	-
58	-	4.0	6.1	3.4	9.2	0.8	5.2	-	4.1	6.3	-	-
59	-	3.4	6.8	2.8	6.6	2.1	5.2	-	4.4	2.4	-	-
60	-	4.5	3.4	2.1	9.4	3.3	7.3	-	5.5	9.4	-	-
61	-	4.0	4.8	1.7	4.6	2.5	4.2	-	5.5	6.3	-	-
62	-	2.9	3.4	4.3	5.9	2.9	5.5	-	5.0	6.3	-	-
63	-	1.8	4.1	1.7	3.8	2.1	7.0	-	5.5	6.3	-	-
64	-	2.4	2.7	1.1	3.6	6.3	5.7	-	7.1	5.5	-	-
65	-	1.3	1.4	1.3	2.8	4.6	5.0	-	4.5	3.1	-	-
66	-	1.1	2.0	1.3	1.5	5.0	2.6	-	4.5	3.1	-	-
67	-	1.6	1.4	0.6	1.5	3.3	1.6	-	2.7	3.1	-	-
68	-	1.1	0.7	0.6	1.5	4.2	1.8	-	2.3	2.4	-	-
69	-	0.5	1.4	1.1	0.8	4.2	1.6	-	3.3	0.8	-	-
70	-	0.3	0.7	1.7	0.5	3.8	2.1	-	1.7	4.7	-	-
71	-	0.0	1.4	0.4	0.3	4.2	1.6	-	1.4	0.8	-	-
72	-	0.0	0.0	0.6	0.3	1.7	1.6	-	1.4	0.8	-	-
73	-	0.5	0.7	1.5	0.0	3.3	0.5	-	0.6	0.8	-	-
74	-	0.3	0.0	0.6	0.0	3.8	1.0	-	1.2	0.0	-	-
75	-	0.0	0.0	0.2	0.3	3.3	0.3	-	0.6	0.0	-	-
76	-	0.0	0.7	0.2	0.0	1.7	0.0	-	0.8	0.8	-	-
77	-	0.0	0.0	0.2	0.0	2.1	0.5	-	0.2	0.0	-	-
78	-	0.0	0.0	0.4	0.0	0.0	0.3	-	0.9	0.0	-	-
79	-	0.3	0.0	0.4	0.3	0.4	0.3	-	0.2	0.0	-	-
80	-	0.0	0.0	0.2	0.0	1.3	0.3	-	0.3	0.0	-	-
81	-	0.3	0.0	0.2	0.0	0.0	0.3	-	0.3	0.0	-	-
82	-	0.0	0.7	0.4	0.0	0.0	0.0	-	0.0	0.8	-	-
83	-	0.0	0.0	0.0	0.5	0.8	0.3	-	0.0	-	-	-
84	-	0.3	0.0	0.4	0.3	-	0.0	-	0.3	-	-	-
85	-	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-
86	-	-	0.0	0.2	0.3	-	0.0	-	-	-	-	-
87	-	-	0.0	0.2	0.0	-	0.0	-	-	-	-	-
88	-	-	0.7	-	0.0	-	0.0	-	-	-	-	-
89	-	-	-	-	0.0	-	0.0	-	-	-	-	-
90	-	-	-	-	0.3	-	0.0	-	-	-	-	-
91	-	-	-	-	-	-	0.3	-	-	-	-	-
TOTAL	0	379	147	467	393	240	383	0	660	127	0	0

Table 16. Length-frequency distribution (in percent) of Pacific cod from Area 5B, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
36	-	0.2	-	-	0.2	-	-	-	-	-	-	-
37	-	0.0	-	-	0.0	-	-	-	-	-	-	-
38	-	0.0	-	-	0.1	-	-	-	-	-	-	-
39	-	0.0	-	0.2	0.1	-	-	-	-	-	-	-
40	-	0.2	-	0.0	0.0	-	-	-	-	-	-	-
41	-	0.2	-	0.0	0.1	-	-	-	-	-	-	-
42	-	0.0	-	0.0	0.3	-	-	0.8	-	-	-	-
43	-	0.7	-	0.3	0.1	-	-	0.0	-	-	-	-
44	1.0	0.9	0.6	0.3	0.0	0.8	0.8	0.8	-	-	-	-
45	1.0	2.3	0.2	1.3	0.2	0.0	1.7	1.7	-	-	-	-
46	3.9	2.3	1.0	1.5	0.2	0.8	0.0	0.8	-	-	-	-
47	3.4	2.5	3.1	3.3	0.4	0.8	2.5	5.0	-	-	-	-
48	2.9	4.8	1.7	3.0	0.8	0.0	5.0	1.7	-	-	-	-
49	1.9	5.1	1.2	3.8	1.0	1.7	1.7	3.3	-	-	-	-
50	1.9	4.4	1.7	5.2	0.8	5.8	0.8	5.0	-	-	-	-
51	3.4	5.5	1.9	3.3	1.4	3.3	2.5	5.0	-	-	-	-
52	4.9	3.7	2.1	5.9	1.2	5.8	5.0	3.3	-	-	-	-
53	3.4	4.4	2.7	6.4	1.9	10.0	5.0	5.0	-	-	-	-
54	1.5	4.8	3.9	5.0	2.7	1.7	3.3	5.8	-	-	-	-
55	2.4	4.4	5.2	5.5	2.9	6.7	7.5	7.5	-	-	-	-
56	1.5	5.5	3.7	5.0	4.3	9.2	6.7	1.7	-	-	-	-
57	5.3	3.2	5.8	5.5	4.9	4.2	5.8	4.2	-	-	-	-
58	4.9	2.8	6.8	4.2	5.2	5.8	4.2	0.8	-	-	-	-
59	3.4	2.8	4.7	3.7	6.0	4.2	3.3	3.3	-	-	-	-
60	9.7	3.9	4.7	4.0	6.8	3.3	2.5	5.0	-	-	-	-
61	2.4	3.9	6.4	3.2	8.8	2.5	5.0	5.0	-	-	-	-
62	2.4	2.8	2.9	2.7	6.4	3.3	3.3	8.3	-	-	-	-
63	5.8	4.4	3.7	2.8	6.9	1.7	2.5	5.0	-	-	-	-
64	2.4	2.8	2.5	1.3	5.9	2.5	3.3	4.2	-	-	-	-
65	2.9	2.1	3.5	1.5	5.6	7.5	1.7	3.3	-	-	-	-
66	2.9	2.3	2.9	0.8	4.6	0.8	2.5	0.0	-	-	-	-
67	1.5	2.8	2.3	2.5	3.6	2.5	5.8	0.0	-	-	-	-
68	0.5	1.6	1.2	1.5	3.7	2.5	1.7	3.3	-	-	-	-
69	2.9	1.6	1.2	2.2	2.2	5.0	2.5	0.0	-	-	-	-
70	1.5	1.4	1.2	2.2	1.8	0.8	3.3	1.7	-	-	-	-
71	2.4	1.1	1.2	1.5	1.0	3.3	4.2	0.8	-	-	-	-
72	3.4	0.5	1.7	1.0	1.3	1.7	1.7	1.7	-	-	-	-
73	2.4	1.1	2.3	1.3	0.8	1.7	0.8	1.7	-	-	-	-
74	1.9	0.9	1.4	0.8	1.4	-	2.5	0.0	-	-	-	-
75	1.0	1.8	1.6	0.3	0.6	-	0.0	2.5	-	-	-	-
76	1.9	1.1	0.8	0.8	0.5	-	0.8	0.0	-	-	-	-
77	1.0	0.7	2.1	0.7	0.8	-	-	0.0	-	-	-	-
78	2.4	0.2	1.6	1.0	0.3	-	-	0.8	-	-	-	-
79	0.5	0.2	1.0	0.2	0.6	-	-	0.8	-	-	-	-
80	0.5	0.2	1.2	0.7	0.1	-	-	0.0	-	-	-	-
81	0.0	0.0	1.0	0.8	0.3	-	-	-	-	-	-	-
82	0.5	0.7	0.6	0.3	0.3	-	-	-	-	-	-	-
83	0.0	0.5	0.4	0.5	0.2	-	-	-	-	-	-	-
84	0.5	0.0	1.2	0.7	0.3	-	-	-	-	-	-	-
85	-	0.0	1.0	0.2	0.3	-	-	-	-	-	-	-
86	-	0.2	0.6	0.3	0.1	-	-	-	-	-	-	-
87	-	0.0	1.0	0.3	0.0	-	-	-	-	-	-	-
88	-	0.0	0.2	0.0	0.0	-	-	-	-	-	-	-
89	-	0.2	0.2	0.2	0.0	-	-	-	-	-	-	-
90	-	0.2	0.2	-	0.2	-	-	-	-	-	-	-
91	-	-	0.0	-	0.1	-	-	-	-	-	-	-
92	-	-	0.0	-	0.1	-	-	-	-	-	-	-
93	-	-	0.2	-	0.1	-	-	-	-	-	-	-
TOTAL	206	435	515	598	1183	120	120	120	0	0	0	0

Table 17. Length-frequency distribution (in percent) of Pacific cod from Area 3D, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
36	-	-	-	-	-	0.3	-	-	-	-	-	-
37	-	-	-	-	-	0.0	-	-	-	-	-	-
38	-	-	-	-	-	0.7	-	-	-	-	-	-
39	-	-	-	-	-	0.7	-	-	-	-	-	-
40	-	-	0.8	-	-	0.3	-	-	-	-	-	-
41	-	-	0.8	-	-	2.3	-	-	-	-	-	-
42	-	-	3.1	-	-	6.6	1.0	-	-	-	-	-
43	-	-	0.8	-	-	8.6	0.0	-	1.6	-	-	-
44	-	-	3.1	-	-	5.3	1.5	-	1.6	-	-	-
45	-	-	5.4	-	-	7.9	0.5	-	0.8	-	-	-
46	-	-	3.8	-	-	10.9	3.1	-	2.8	-	-	-
47	-	-	3.1	-	-	6.6	5.2	-	2.8	-	-	-
48	-	-	4.6	-	-	5.3	1.0	-	4.4	-	-	-
49	-	-	4.6	-	-	5.6	3.1	-	2.0	-	-	-
50	-	-	3.1	-	-	5.0	2.6	-	2.4	-	-	-
51	-	-	5.4	-	-	4.6	2.6	-	6.0	-	-	-
52	-	-	4.6	-	-	5.0	3.1	-	3.6	-	-	-
53	-	-	3.1	-	-	4.0	6.2	-	5.6	-	-	-
54	-	-	4.6	-	-	2.0	6.7	-	3.2	-	-	-
55	-	-	7.7	-	-	0.3	4.6	-	4.8	-	-	-
56	-	-	7.7	-	-	2.0	1.0	-	4.8	-	-	-
57	-	-	6.9	-	-	2.0	5.7	-	7.6	-	-	-
58	-	-	5.4	-	-	1.0	5.7	-	7.2	-	-	-
59	-	-	5.4	-	-	1.0	8.2	-	4.0	-	-	-
60	-	-	2.3	-	-	1.3	6.2	-	6.4	-	-	-
61	-	-	0.8	-	-	2.6	4.6	-	6.4	-	-	-
62	-	-	2.3	-	-	1.0	4.1	-	5.6	-	-	-
63	-	-	3.8	-	-	1.3	4.6	-	3.6	-	-	-
64	-	-	1.5	-	-	0.3	2.6	-	2.8	-	-	-
65	-	-	2.3	-	-	2.6	3.6	-	1.2	-	-	-
66	-	-	0.8	-	-	0.3	2.6	-	2.4	-	-	-
67	-	-	0.0	-	-	0.0	1.5	-	2.0	-	-	-
68	-	-	0.0	-	-	0.0	2.1	-	2.0	-	-	-
69	-	-	0.0	-	-	0.0	0.0	-	1.6	-	-	-
70	-	-	0.8	-	-	0.0	3.6	-	0.8	-	-	-
71	-	-	0.8	-	-	0.3	0.0	-	0.0	-	-	-
72	-	-	0.0	-	-	0.0	1.0	-	0.0	-	-	-
73	-	-	0.0	-	-	0.3	0.5	-	0.0	-	-	-
74	-	-	0.0	-	-	0.3	0.5	-	0.0	-	-	-
75	-	-	0.0	-	-	0.0	0.0	-	0.0	-	-	-
76	-	-	0.0	-	-	0.3	0.0	-	0.4	-	-	-
77	-	-	0.0	-	-	0.7	0.5	-	-	-	-	-
78	-	-	0.0	-	-	0.0	-	-	-	-	-	-
79	-	-	0.0	-	-	0.0	-	-	-	-	-	-
80	-	-	0.0	-	-	0.3	-	-	-	-	-	-
81	-	-	0.0	-	-	-	-	-	-	-	-	-
82	-	-	0.0	-	-	-	-	-	-	-	-	-
83	-	-	0.0	-	-	-	-	-	-	-	-	-
84	-	-	0.0	-	-	-	-	-	-	-	-	-
85	-	-	0.8	-	-	-	-	-	-	-	-	-
TOTAL	0	0	130	0	0	302	194	0	251	0	0	0

Table 18. Length-frequency distribution (in percent) of Pacific cod from Amphitrite Bank, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
34	Tr	-	-	-	-	-	-	-	-	-	-	-
35	0.0	-	-	-	-	-	-	-	-	-	-	-
36	0.0	-	-	-	-	-	-	-	0.1	-	-	-
37	0.0	-	-	-	0.1	-	-	-	Tr	0.1	-	-
38	0.1	-	-	-	0.0	-	-	-	0.1	0.2	-	-
39	0.1	-	-	-	0.1	-	-	-	0.1	0.3	0.2	-
40	Tr	-	0.1	0.1	0.0	-	-	-	0.4	0.2	0.2	-
41	0.1	Tr	Tr	0.3	0.0	0.2	-	-	0.2	0.4	0.2	-
42	0.1	0.0	0.1	0.1	0.0	0.0	-	-	0.5	0.4	0.7	-
43	0.1	0.2	0.2	0.2	0.3	0.7	-	-	0.1	0.9	0.7	-
44	0.5	0.1	0.2	0.4	0.2	0.9	-	-	0.3	0.5	1.0	-
45	0.5	0.2	0.2	0.5	0.4	0.0	-	-	0.5	1.4	1.2	-
46	0.4	0.2	0.2	0.8	0.6	0.7	-	-	0.8	1.3	1.5	-
47	0.4	0.7	0.6	0.5	0.8	0.4	-	-	1.0	1.4	0.5	-
48	0.4	0.6	0.6	0.4	1.1	0.0	-	-	1.2	1.3	1.7	-
49	0.4	0.6	1.1	1.0	1.7	0.2	-	-	1.2	1.9	2.0	-
50	0.9	1.2	2.1	1.1	2.2	0.7	-	-	1.7	3.4	2.6	-
51	0.8	2.0	2.6	1.3	2.6	1.1	-	-	2.8	3.5	5.5	-
52	0.9	2.9	3.6	1.6	3.0	1.3	-	-	4.6	3.4	5.8	-
53	1.4	3.2	4.2	1.7	3.5	1.3	-	-	4.5	4.7	5.5	-
54	1.4	3.1	5.0	2.9	4.4	0.9	-	-	5.6	7.1	4.5	-
55	2.2	4.0	7.0	2.7	4.7	2.7	-	-	5.4	5.9	4.3	-
56	3.0	5.9	5.9	3.0	5.4	4.2	-	-	6.0	6.4	4.6	-
57	4.0	6.0	5.5	5.2	4.9	4.0	-	-	6.0	6.4	3.8	-
58	4.4	5.7	5.6	4.0	4.8	2.5	-	-	6.0	4.6	4.3	-
59	5.0	5.2	6.2	5.5	4.9	4.7	-	-	4.5	5.6	6.5	-
60	5.1	4.8	5.2	4.8	5.1	4.9	-	-	5.8	5.2	4.0	-
61	5.4	3.6	5.2	4.8	5.1	5.1	-	-	5.4	4.9	4.0	-
62	5.5	3.6	5.7	5.6	4.4	4.9	-	-	4.3	5.5	3.0	-
63	5.5	4.4	4.9	6.6	3.8	4.0	-	-	4.1	4.9	3.3	-
64	6.0	4.0	4.6	6.3	3.8	7.1	-	-	3.4	2.7	2.8	-
65	5.4	4.2	4.1	5.8	3.9	8.7	-	-	2.9	3.3	3.3	-
66	6.4	3.8	3.9	5.0	2.8	6.3	-	-	2.8	3.5	4.0	-
67	5.0	3.9	2.3	4.3	3.0	3.1	-	-	2.3	1.6	4.0	-
68	5.0	3.5	2.6	4.4	2.6	4.0	-	-	2.6	1.7	1.8	-
69	4.1	4.0	2.8	3.8	2.9	4.2	-	-	1.7	0.8	1.8	-
70	3.1	3.4	1.7	3.6	2.8	4.2	-	-	2.0	1.4	3.0	-
71	3.4	2.7	1.7	2.6	2.4	3.3	-	-	1.2	0.7	1.5	-
72	2.9	2.2	1.3	2.0	2.4	2.9	-	-	1.5	0.4	1.5	-
73	1.9	2.2	0.6	1.4	1.2	2.7	-	-	1.2	0.1	1.3	-
74	1.8	1.5	0.5	0.9	1.4	1.3	-	-	0.7	0.2	1.2	-
75	1.4	1.7	0.5	1.2	1.4	0.9	-	-	0.9	0.1	0.7	-
76	0.9	1.1	0.4	1.0	1.3	0.9	-	-	0.8	0.4	0.5	-
77	0.8	1.1	0.2	0.8	0.8	0.9	-	-	0.6	0.3	0.2	-
78	0.9	0.6	0.2	0.3	0.9	0.4	-	-	0.7	0.2	0.3	-
79	0.9	0.6	0.2	0.5	0.9	0.7	-	-	0.3	0.2	0.3	-
80	0.5	0.4	0.1	0.4	0.7	1.1	-	-	0.2	0.1	0.3	-
81	0.4	0.2	0.2	0.2	0.3	0.4	-	-	0.1	0.1	0.2	-
82	0.3	0.2	0.1	0.2	0.1	0.4	-	-	0.4	-	0.0	-
83	Tr	0.2	Tr	0.1	0.3	0.0	-	-	0.1	-	0.2	-
84	Tr	0.0	0.0	0.1	0.1	0.2	-	-	0.1	-	-	-
85	Tr	0.1	0.1	0.1	0.2	0.2	-	-	0.1	-	-	-
86	-	-	-	-	0.1	0.2	-	-	0.0	-	-	-
87	-	-	-	-	0.1	-	-	-	Tr	-	-	-
88	-	-	-	-	0.0	-	-	-	Tr	-	-	-
89	-	-	-	-	0.1	-	-	-	-	-	-	-
TOTAL	2221	2179	3266	1825	1563	448	0	0	2248	916	604	0

Table 19. Length-frequency distribution (in percent) of Pacific cod from Amphitrite Bank, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
29	-	-	-	-	-	-	-	-	0.4	-	-	-
30	-	-	-	-	-	-	-	-	0.0	-	-	-
31	-	-	-	-	-	-	-	-	0.4	-	-	-
32	-	-	-	-	-	-	-	-	0.0	-	-	-
33	-	-	-	-	-	-	-	-	0.0	-	-	-
34	-	-	-	-	-	-	-	-	0.0	-	-	-
35	-	-	-	-	-	-	-	-	0.0	-	-	0.2
36	-	-	-	-	-	-	-	-	0.4	-	-	0.0
37	-	-	-	-	-	-	0.6	-	0.7	-	-	0.0
38	-	-	-	-	-	0.5	0.3	-	0.7	-	-	0.0
39	-	-	-	-	0.1	0.0	0.3	0.9	0.4	-	-	0.2
40	-	-	-	-	0.3	1.6	1.5	0.5	2.2	-	-	0.0
41	-	1.5	-	-	1.0	0.5	3.2	0.9	2.6	-	-	0.0
42	-	0.5	-	-	0.7	0.5	2.1	0.5	3.3	-	-	0.4
43	-	1.5	1.0	-	1.0	1.1	1.5	0.9	1.9	-	-	0.0
44	0.7	2.1	0.0	-	1.3	1.6	1.8	0.0	1.9	-	-	0.9
45	1.4	3.1	0.0	-	2.2	1.6	2.1	1.4	1.5	-	-	0.2
46	0.7	3.6	1.9	-	2.1	3.3	3.8	1.4	1.5	-	-	1.4
47	2.1	2.6	1.9	-	2.1	1.6	3.5	0.5	1.9	-	-	3.6
48	2.8	1.5	0.0	-	1.8	1.6	2.9	4.5	2.6	-	-	3.0
49	2.8	3.1	0.0	-	1.9	2.2	2.4	2.7	1.5	-	-	2.9
50	4.9	2.1	1.0	-	3.3	2.7	5.0	4.5	2.6	-	-	5.7
51	3.5	2.6	1.0	-	3.8	2.7	1.5	6.3	2.2	-	-	5.5
52	3.5	0.5	0.0	-	2.8	1.6	2.7	3.6	3.7	-	-	7.3
53	2.1	3.1	2.9	-	4.2	3.3	2.1	3.6	4.1	-	-	7.3
54	1.4	5.6	2.9	-	4.0	2.2	3.2	7.7	5.9	-	-	8.6
55	2.8	5.1	2.9	-	4.2	4.4	3.8	5.9	5.9	-	-	5.7
56	2.8	4.6	4.9	-	5.3	4.4	2.9	5.9	8.1	-	-	5.9
57	4.2	7.7	7.8	-	5.6	4.9	5.6	5.0	8.9	-	-	6.6
58	1.4	5.1	6.8	-	4.9	5.5	3.2	9.0	6.7	-	-	6.1
59	2.1	7.2	1.0	-	4.9	8.2	5.0	4.5	5.2	-	-	4.6
60	4.2	7.7	10.7	-	4.7	6.0	3.2	5.0	4.1	-	-	6.2
61	2.8	4.1	5.8	-	4.0	4.4	2.4	2.3	2.6	-	-	4.1
62	3.5	6.2	4.9	-	4.3	3.3	1.5	4.5	2.6	-	-	2.7
63	4.2	2.6	7.8	-	3.6	1.6	2.9	2.3	1.1	-	-	2.3
64	2.1	2.6	4.9	-	4.5	2.7	2.4	2.3	4.1	-	-	2.1
65	4.2	2.6	8.7	-	4.2	3.3	3.8	1.4	1.9	-	-	2.0
66	2.1	4.6	3.9	-	2.9	2.7	1.8	3.2	3.3	-	-	1.4
67	4.9	1.0	3.9	-	1.4	2.2	2.1	1.4	1.1	-	-	0.2
68	2.8	0.5	2.9	-	2.4	3.8	2.4	1.8	0.7	-	-	0.7
69	6.3	1.5	5.8	-	1.8	2.7	2.1	0.9	0.0	-	-	0.5
70	4.9	0.0	1.0	-	1.8	3.3	2.9	1.4	0.0	-	-	0.5
71	2.8	0.5	1.0	-	1.9	1.6	1.8	0.9	0.4	-	-	0.5
72	2.1	1.0	0.0	-	1.3	0.5	1.2	1.4	0.0	-	-	0.0
73	2.8	1.0	1.0	-	0.6	2.2	1.8	0.0	0.4	-	-	0.2
74	5.6	0.5	1.0	-	0.6	1.1	0.3	0.0	0.7	-	-	0.4
75	1.4	0.5	0.0	-	1.0	1.1	2.1	0.0	-	-	-	0.0
76	2.1	-	0.0	-	0.6	0.5	1.8	0.0	-	-	-	0.0
77	0.7	-	1.0	-	0.4	0.0	1.2	0.0	-	-	-	0.0
78	0.0	-	-	-	0.0	0.0	1.2	0.5	-	-	-	0.0
79	1.4	-	-	-	0.1	0.0	0.3	0.5	-	-	-	0.0
80	0.0	-	-	-	0.1	0.0	-	0.5	-	-	-	0.2
81	0.0	-	-	-	0.3	0.0	-	0.5	-	-	-	-
82	0.0	-	-	-	0.0	0.5	-	-	-	-	-	-
83	0.7	-	-	-	0.1	-	-	-	-	-	-	-
TOTAL	144	195	103	0	718	183	339	222	270	0	0	561

Table 20. Length-frequency distribution (in percent) of Pacific cod from Big Bank, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
38	-	-	-	-	-	0.7	-	-	-	-	-	-
39	-	-	-	-	-	0.2	-	-	-	-	-	-
40	0.5	-	-	-	-	0.9	-	-	-	-	-	-
41	0.3	-	0.2	-	-	2.0	-	-	-	-	-	-
42	1.4	0.1	0.0	-	-	2.2	-	-	-	-	-	-
43	1.6	0.0	0.7	-	-	0.9	-	-	-	-	-	-
44	2.7	0.0	1.8	-	-	1.3	-	-	-	-	-	-
45	3.0	0.2	2.0	-	-	2.2	-	-	-	-	-	-
46	1.6	1.4	1.4	-	0.9	2.2	-	-	-	-	-	-
47	3.8	2.3	2.0	-	0.9	4.9	-	-	-	-	-	-
48	6.8	3.8	2.0	-	0.0	4.2	-	-	-	-	-	-
49	7.6	2.7	2.9	-	0.0	6.9	-	-	-	-	-	-
50	7.1	2.7	3.2	-	1.8	2.7	-	-	-	-	-	-
51	4.1	3.3	5.4	-	2.8	4.0	-	-	-	-	-	-
52	4.9	3.6	3.4	-	4.6	6.5	-	-	-	-	-	-
53	2.4	5.0	5.9	-	7.3	3.1	-	-	-	-	-	-
54	3.5	5.5	5.2	-	2.8	4.0	-	-	-	-	-	-
55	1.9	5.8	6.1	-	4.6	5.3	-	-	-	-	-	-
56	2.2	8.8	7.7	-	11.0	4.9	-	-	-	-	-	-
57	2.7	8.3	5.9	-	9.2	3.6	-	-	-	-	-	-
58	1.4	9.4	6.3	-	6.4	2.7	-	-	-	-	-	-
59	2.2	8.1	5.9	-	11.0	2.9	-	-	-	-	-	-
60	3.8	8.5	2.9	-	2.8	3.6	-	-	-	-	-	-
61	3.5	5.2	4.1	-	7.3	4.2	-	-	-	-	-	-
62	3.5	4.9	4.1	-	5.5	1.3	-	-	-	-	-	-
63	2.7	1.8	4.1	-	5.5	3.3	-	-	-	-	-	-
64	5.4	1.9	2.5	-	5.5	2.7	-	-	-	-	-	-
65	3.3	1.4	2.0	-	2.8	2.4	-	-	-	-	-	-
66	2.4	0.9	2.3	-	3.7	1.6	-	-	-	-	-	-
67	2.2	0.6	2.7	-	0.9	1.6	-	-	-	-	-	-
68	1.9	0.6	2.0	-	1.8	2.0	-	-	-	-	-	-
69	3.0	0.8	1.4	-	0.0	2.4	-	-	-	-	-	-
70	0.8	0.5	0.5	-	0.9	0.7	-	-	-	-	-	-
71	1.4	0.2	1.4	-	-	1.6	-	-	-	-	-	-
72	0.8	0.4	0.7	-	-	1.6	-	-	-	-	-	-
73	0.3	0.1	0.5	-	-	0.9	-	-	-	-	-	-
74	0.8	0.4	0.2	-	-	0.9	-	-	-	-	-	-
75	1.4	0.4	0.0	-	-	0.2	-	-	-	-	-	-
76	0.0	0.1	0.2	-	-	0.0	-	-	-	-	-	-
77	0.0	0.2	0.0	-	-	0.0	-	-	-	-	-	-
78	0.0	0.0	0.2	-	-	0.2	-	-	-	-	-	-
79	0.5	0.1	0.0	-	-	0.0	-	-	-	-	-	-
80	0.3	-	0.2	-	-	0.0	-	-	-	-	-	-
81	0.3	-	-	-	-	0.4	-	-	-	-	-	-
TOTAL	368	852	442	0	109	449	0	0	0	0	0	0

Table 21. Length-frequency distribution (in percent) of Pacific cod from Big Bank, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
38	-	-	-	-	-	0.2	-	-	-	-	-	-
39	-	-	-	-	-	0.0	-	-	-	-	-	-
40	0.1	-	0.2	-	-	0.1	-	-	0.4	-	-	-
41	0.1	-	0.2	-	-	0.2	-	-	0.0	-	-	-
42	0.1	-	0.7	-	-	0.2	-	-	0.0	-	-	-
43	0.3	-	1.4	0.8	-	0.2	-	0.8	1.5	-	-	-
44	0.6	0.2	1.7	0.8	-	0.4	4.2	0.0	0.4	-	-	-
45	1.9	0.5	1.9	4.2	-	2.0	2.5	3.3	1.5	-	-	-
46	2.4	0.8	1.9	0.8	-	2.1	1.7	2.5	2.6	-	-	-
47	4.9	1.3	1.9	3.3	-	2.3	3.3	2.5	5.9	-	-	-
48	5.8	2.8	3.5	5.8	-	5.0	1.7	5.8	5.2	-	-	-
49	8.6	3.4	3.1	5.0	-	3.8	1.7	2.5	6.3	-	-	-
50	10.3	5.0	5.4	3.3	-	5.2	5.0	5.0	9.7	-	-	-
51	8.9	8.8	2.4	1.7	-	3.5	4.2	5.0	8.9	-	-	-
52	7.1	6.0	1.9	3.3	-	6.1	4.2	7.5	7.4	-	-	-
53	6.1	7.0	7.0	2.5	-	4.6	4.2	7.5	7.4	-	-	-
54	5.7	6.2	5.9	0.8	-	4.4	4.2	11.7	7.8	-	-	-
55	3.8	5.0	4.2	4.2	-	4.6	5.8	1.7	7.4	-	-	-
56	3.6	6.2	5.1	3.3	-	5.4	3.3	5.0	6.3	-	-	-
57	1.9	4.1	5.9	5.0	-	6.4	4.2	2.5	2.6	-	-	-
58	2.6	5.4	5.8	4.2	-	5.1	4.2	5.0	1.9	-	-	-
59	2.1	6.2	5.8	5.0	-	4.4	7.5	1.7	3.0	-	-	-
60	2.2	4.7	4.9	1.7	-	3.0	5.0	3.3	1.5	-	-	-
61	1.4	4.1	4.0	4.2	-	4.1	1.7	0.8	1.5	-	-	-
62	2.8	3.7	4.2	5.8	-	2.7	3.3	4.2	1.1	-	-	-
63	1.3	3.4	5.1	5.8	-	3.0	2.5	0.8	1.1	-	-	-
64	2.9	2.4	3.5	4.2	-	3.3	0.8	4.2	1.9	-	-	-
65	2.0	1.6	2.4	2.5	-	3.8	4.2	1.7	1.5	-	-	-
66	1.6	1.6	2.1	4.2	-	3.1	0.8	4.2	2.6	-	-	-
67	1.7	2.8	1.9	2.5	-	1.8	4.2	1.7	0.7	-	-	-
68	1.5	1.1	0.9	2.5	-	2.1	1.7	2.5	0.7	-	-	-
69	1.2	1.1	1.0	2.5	-	1.5	2.5	0.0	1.1	-	-	-
70	0.8	0.7	0.7	4.2	-	0.6	0.0	0.8	-	-	-	-
71	0.8	0.8	1.0	1.7	-	1.3	0.8	1.7	-	-	-	-
72	0.7	0.5	0.7	0.8	-	1.0	3.3	1.7	-	-	-	-
73	0.4	0.8	0.2	0.0	-	0.7	1.7	0.8	-	-	-	-
74	0.5	0.7	0.3	0.8	-	0.4	1.7	0.8	-	-	-	-
75	0.3	0.5	0.2	0.0	-	0.4	1.7	0.0	-	-	-	-
76	0.3	0.2	0.5	1.7	-	0.1	0.8	0.0	-	-	-	-
77	0.3	0.2	0.0	0.8	-	0.2	0.0	0.0	-	-	-	-
78	0.1	0.0	0.2	-	-	0.2	0.8	0.0	-	-	-	-
79	0.0	0.0	0.2	-	-	0.1	0.8	0.8	-	-	-	-
80	0.1	0.0	-	-	-	-	-	-	-	-	-	-
81	0.0	0.2	-	-	-	-	-	-	-	-	-	-
82	0.0	0.2	-	-	-	-	-	-	-	-	-	-
83	0.1	-	-	-	-	-	-	-	-	-	-	-
TOTAL	1561	615	573	120	0	839	120	120	269	0	0	0

Table 22. Length-frequency distribution (in percent) of Pacific cod from Swiftsure, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
31	0.1	-	-	-	-	-	-	-	-	-	-	-
32	0.0	-	-	-	-	-	-	-	-	-	-	-
33	0.0	-	-	-	-	-	-	-	-	-	-	-
34	0.0	0.1	-	-	-	-	-	-	-	-	-	-
35	0.1	0.0	-	-	-	-	-	-	-	-	-	-
36	0.0	0.0	-	-	-	-	-	-	-	-	0.5	-
37	0.1	0.0	-	-	-	-	-	-	-	-	1.0	-
38	0.4	0.0	-	-	-	-	-	-	-	-	3.5	-
39	0.3	0.0	-	-	-	-	-	-	0.4	-	3.0	-
40	0.8	0.1	-	-	-	-	-	-	0.4	1.1	1.0	-
41	1.1	0.1	-	-	-	0.1	-	-	0.4	2.7	6.5	-
42	2.6	0.1	0.6	-	-	0.0	-	0.8	0.0	1.6	4.5	-
43	3.5	1.0	1.2	0.6	-	0.1	0.8	2.5	0.4	3.2	6.5	-
44	4.5	1.9	0.0	0.4	0.9	0.7	3.2	0.8	0.4	4.3	7.5	-
45	4.4	3.1	0.0	2.6	0.9	1.3	1.6	5.0	0.9	3.8	5.0	-
46	5.4	5.3	1.2	2.4	0.9	2.2	7.9	0.8	0.4	6.5	6.5	-
47	5.9	5.9	0.0	2.8	6.0	2.9	5.6	2.5	1.3	5.9	2.0	-
48	6.9	5.1	1.2	3.9	5.1	1.4	4.0	1.7	0.4	1.6	1.5	-
49	5.6	6.6	1.9	1.9	0.0	2.6	5.6	0.8	0.4	5.9	1.5	-
50	5.8	4.6	2.5	2.4	2.6	2.3	7.1	5.0	1.8	5.4	2.5	-
51	3.7	3.7	1.9	2.8	2.6	2.5	4.0	1.7	2.6	3.2	2.0	-
52	3.4	3.1	1.2	1.5	5.1	2.2	3.2	0.8	0.9	4.3	2.0	-
53	3.2	2.8	1.9	2.4	5.1	2.2	0.0	5.0	1.8	2.2	2.0	-
54	1.7	3.7	0.6	3.2	7.7	3.0	2.4	5.8	1.8	2.7	3.5	-
55	1.7	4.1	7.5	2.1	8.5	2.0	0.8	5.8	5.7	2.2	3.0	-
56	1.8	4.4	4.3	3.2	10.3	3.8	3.2	7.5	8.8	3.8	4.0	-
57	1.5	4.6	5.0	3.6	5.1	3.6	3.2	3.3	4.4	1.1	4.5	-
58	1.7	4.8	4.3	4.3	7.7	8.3	1.6	5.8	7.5	1.1	2.5	-
59	2.0	5.0	6.2	4.3	6.0	7.5	2.4	6.7	7.5	3.8	3.5	-
60	2.6	5.1	5.6	4.1	2.6	5.5	5.6	9.2	7.0	2.7	3.5	-
61	2.8	5.6	5.6	5.6	4.3	5.8	1.6	2.5	5.3	5.4	3.0	-
62	2.7	2.3	6.2	2.8	2.6	6.4	3.2	5.8	5.7	2.2	3.0	-
63	3.7	1.9	4.3	3.0	5.1	4.7	4.0	3.3	4.8	3.2	1.0	-
64	2.5	3.1	3.7	4.1	1.7	5.3	3.2	2.5	3.5	4.8	1.5	-
65	2.3	2.5	3.7	4.1	0.0	4.3	3.2	3.3	2.2	3.2	1.5	-
66	2.4	1.2	5.6	5.6	0.9	3.0	4.8	2.5	4.4	0.5	3.0	-
67	1.9	1.3	6.8	4.1	0.9	3.5	2.4	0.0	3.5	2.2	1.5	-
68	2.2	1.0	3.1	3.4	0.9	2.0	0.8	1.7	5.7	1.1	0.0	-
69	1.8	0.9	4.3	3.4	0.9	3.5	4.0	0.8	0.9	0.5	1.0	-
70	1.8	0.7	1.2	3.9	1.7	1.7	3.2	0.0	1.8	1.6	0.5	-
71	1.2	1.2	3.7	1.1	0.0	1.7	2.4	0.0	2.2	0.5	0.0	-
72	1.2	0.6	1.9	1.9	0.0	1.1	0.8	0.8	1.8	1.1	0.0	-
73	0.8	0.3	0.6	2.8	0.0	0.6	1.6	0.0	0.9	0.5	0.0	-
74	0.6	0.4	0.6	1.7	1.7	0.8	0.0	0.0	0.4	0.0	0.0	-
75	0.2	0.6	0.0	0.9	0.0	0.8	0.8	2.5	0.4	0.5	0.0	-
76	0.3	0.3	0.6	1.3	2.6	0.1	0.0	0.0	0.0	0.5	0.0	-
77	0.4	0.3	0.0	0.6	-	0.1	1.6	0.0	0.4	1.1	0.0	-
78	0.1	0.1	0.0	0.2	-	0.1	0.8	1.7	0.4	2.2	0.5	-
79	0.1	0.3	0.0	0.2	-	0.0	-	0.0	0.4	-	-	-
80	0.1	-	0.0	0.6	-	0.0	-	0.8	-	-	-	-
81	0.1	-	0.0	0.2	-	0.0	-	-	-	-	-	-
82	-	-	0.6	-	-	0.1	-	-	-	-	-	-
TOTAL	1364	681	161	466	117	832	126	120	228	186	200	0

Table 23. Length-frequency distribution (in percent) of Pacific cod from Swiftsure, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
37	0.2	-	-	-	-	-	-	-	-	-	-	-
38	0.2	-	-	-	-	-	-	-	-	-	-	-
39	0.0	-	-	-	-	-	-	-	-	-	-	-
40	0.0	-	-	-	-	-	0.2	-	-	-	-	-
41	0.2	-	-	-	-	-	0.0	-	-	-	-	-
42	0.8	-	-	-	-	-	0.5	-	-	-	-	-
43	1.9	-	-	-	-	-	0.5	-	-	-	-	-
44	2.3	-	-	-	-	-	0.5	-	-	-	-	-
45	3.1	-	-	-	-	-	0.7	-	-	-	-	-
46	4.8	1.1	-	-	-	-	4.3	-	-	-	-	-
47	5.8	1.1	-	-	-	-	2.6	-	-	-	-	-
48	6.9	0.6	-	-	-	-	5.3	-	-	-	-	-
49	7.9	2.8	-	-	-	-	3.8	-	-	-	-	-
50	7.3	1.1	-	-	-	-	3.3	-	-	-	-	-
51	9.4	3.4	-	-	-	-	4.3	-	-	-	-	-
52	7.7	6.7	-	-	-	-	3.6	-	-	-	-	-
53	5.2	3.9	-	-	-	-	3.3	-	-	-	-	-
54	6.0	2.8	-	-	-	-	3.1	-	-	-	-	-
55	2.9	3.4	-	-	-	-	1.7	-	-	-	-	-
56	1.5	7.3	-	-	-	-	2.6	-	-	-	-	-
57	1.7	7.3	-	-	-	-	2.9	-	-	-	-	-
58	0.6	6.2	-	-	-	-	2.1	-	-	-	-	-
59	0.4	6.7	-	-	-	-	3.1	-	-	-	-	-
60	1.2	6.7	-	-	-	-	2.9	-	-	-	-	-
61	2.1	6.2	-	-	-	-	2.4	-	-	-	-	-
62	1.7	5.1	-	-	-	-	4.1	-	-	-	-	-
63	1.7	6.7	-	-	-	-	2.9	-	-	-	-	-
64	1.5	7.9	-	-	-	-	5.0	-	-	-	-	-
65	2.3	0.6	-	-	-	-	4.8	-	-	-	-	-
66	2.1	2.8	-	-	-	-	3.6	-	-	-	-	-
67	0.8	2.2	-	-	-	-	3.8	-	-	-	-	-
68	1.2	0.0	-	-	-	-	3.3	-	-	-	-	-
69	1.7	1.1	-	-	-	-	2.6	-	-	-	-	-
70	1.5	1.1	-	-	-	-	2.1	-	-	-	-	-
71	0.6	0.6	-	-	-	-	1.7	-	-	-	-	-
72	1.7	1.7	-	-	-	-	2.1	-	-	-	-	-
73	1.7	1.1	-	-	-	-	1.9	-	-	-	-	-
74	0.8	0.0	-	-	-	-	1.9	-	-	-	-	-
75	0.2	0.6	-	-	-	-	2.1	-	-	-	-	-
76	0.0	0.0	-	-	-	-	1.0	-	-	-	-	-
77	0.0	1.1	-	-	-	-	0.2	-	-	-	-	-
78	0.0	-	-	-	-	-	1.4	-	-	-	-	-
79	0.6	-	-	-	-	-	0.7	-	-	-	-	-
80	-	-	-	-	-	-	0.2	-	-	-	-	-
81	-	-	-	-	-	-	0.2	-	-	-	-	-
82	-	-	-	-	-	-	0.0	-	-	-	-	-
83	-	-	-	-	-	-	0.0	-	-	-	-	-
84	-	-	-	-	-	-	0.2	-	-	-	-	-
85	-	-	-	-	-	-	0.0	-	-	-	-	-
86	-	-	-	-	-	-	0.2	-	-	-	-	-
TOTAL	481	178	0	0	0	0	419	0	0	0	0	0

Table 24. Length-frequency distribution (in percent) of Pacific cod from MSA 14, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
39	-	-	-	-	-	0.2	-	-	-	-	-	-
40	-	-	0.2	-	-	0.0	-	-	-	-	-	-
41	-	-	0.5	-	0.1	0.7	-	-	-	-	-	-
42	-	0.5	0.9	-	0.1	0.9	-	-	-	-	-	-
43	-	0.9	2.0	0.8	0.6	1.4	-	-	-	-	-	-
44	-	1.4	1.5	0.0	0.4	3.6	-	-	-	-	-	-
45	-	2.3	2.4	0.0	2.4	7.9	-	-	-	-	-	-
46	-	3.2	2.1	0.8	1.1	7.7	-	-	-	-	-	-
47	-	4.8	2.7	1.7	2.1	7.2	0.8	-	0.7	-	-	-
48	-	4.4	2.4	1.7	1.0	5.0	0.8	-	0.0	-	-	-
49	-	6.0	1.2	3.3	2.1	2.7	2.5	-	1.4	-	-	-
50	-	3.9	1.7	8.3	2.4	2.9	6.7	-	3.4	-	-	-
51	-	3.5	1.1	0.8	2.4	0.9	7.5	-	4.1	-	-	-
52	-	4.1	2.0	1.7	3.8	2.5	7.5	-	6.9	-	-	-
53	-	2.6	2.1	4.2	4.6	2.3	6.7	-	11.4	-	-	-
54	-	2.5	2.0	2.5	3.2	2.5	3.3	-	10.7	-	-	-
55	-	3.5	2.6	1.7	4.2	2.5	8.3	-	7.6	-	-	-
56	-	1.8	1.7	2.5	5.0	3.6	8.3	-	8.6	-	-	-
57	-	2.5	3.6	3.3	5.8	2.7	9.2	-	7.2	-	-	-
58	-	3.9	3.2	9.2	5.2	3.2	4.2	-	7.6	-	-	-
59	-	3.0	4.0	4.2	6.0	3.8	2.5	-	7.2	-	-	-
60	-	3.9	3.8	3.3	5.7	3.4	2.5	-	5.5	-	-	-
61	-	4.6	3.0	4.2	5.6	3.6	4.2	-	2.4	-	-	-
62	-	3.2	4.4	9.2	6.0	3.2	0.0	-	2.1	-	-	-
63	-	3.5	4.1	4.2	5.4	4.3	2.5	-	2.4	-	-	-
64	-	4.1	4.0	2.5	2.9	3.8	1.7	-	1.0	-	-	-
65	-	3.5	4.7	5.8	3.2	2.5	1.7	-	1.4	-	-	-
66	-	3.7	4.4	3.3	3.5	2.9	1.7	-	1.0	-	-	-
67	-	1.9	2.9	5.0	3.3	2.7	5.8	-	0.7	-	-	-
68	-	2.6	3.5	1.7	2.1	2.7	3.3	-	0.7	-	-	-
69	-	2.8	3.0	1.7	2.8	1.1	3.3	-	0.7	-	-	-
70	-	1.9	3.2	3.3	1.1	0.9	2.5	-	1.0	-	-	-
71	-	1.4	3.0	0.8	1.8	0.9	0.8	-	0.7	-	-	-
72	-	1.8	2.6	0.0	1.1	1.1	0.8	-	0.7	-	-	-
73	-	0.7	2.6	3.3	0.3	0.7	0.0	-	1.0	-	-	-
74	-	1.6	2.3	0.0	1.1	0.9	0.0	-	0.7	-	-	-
75	-	1.9	1.7	1.7	0.4	0.5	0.8	-	0.3	-	-	-
76	-	0.0	2.0	1.7	0.6	0.7	-	-	0.0	-	-	-
77	-	0.5	1.1	0.8	0.0	0.0	-	-	0.3	-	-	-
78	-	0.5	1.1	0.0	0.6	0.0	-	-	0.0	-	-	-
79	-	0.0	0.3	0.0	0.1	0.2	-	-	0.0	-	-	-
80	-	0.2	0.6	0.8	-	-	-	-	0.3	-	-	-
81	-	0.4	0.8	-	-	-	-	-	-	-	-	-
82	-	0.2	0.3	-	-	-	-	-	-	-	-	-
83	-	0.4	0.2	-	-	-	-	-	-	-	-	-
84	-	-	0.5	-	-	-	-	-	-	-	-	-
85	-	-	0.3	-	-	-	-	-	-	-	-	-
TOTAL	0	567	658	120	718	444	120	0	290	0	0	0

Table 25. Length-frequency distribution (in percent) of Pacific cod from MSA 14, April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
42	-	-	-	0.8	-	-	-	-	-	-	-	-
43	-	-	-	0.8	0.6	-	-	-	-	-	-	-
44	-	-	-	0.8	0.0	-	-	-	-	-	-	-
45	-	-	-	1.7	0.6	-	0.8	-	-	-	-	-
46	-	-	-	0.8	1.1	-	1.7	-	-	-	-	-
47	-	-	-	3.3	1.1	-	1.7	-	-	-	-	-
48	-	-	-	3.3	1.1	-	2.5	-	-	-	-	-
49	-	-	-	8.3	1.7	-	1.7	-	-	-	-	-
50	-	1.3	-	5.8	3.4	-	6.7	-	-	-	-	-
51	-	0.8	-	4.2	4.0	-	9.2	-	-	-	-	-
52	-	1.3	-	5.8	2.9	-	8.3	-	-	-	-	-
53	-	0.8	-	1.7	5.1	-	5.8	-	-	-	-	-
54	-	0.4	-	4.2	4.0	-	7.5	-	-	-	-	-
55	-	2.1	-	2.5	5.1	-	5.8	-	-	-	-	-
56	-	0.4	-	4.2	2.9	-	9.2	-	-	-	-	-
57	-	0.8	-	5.8	2.9	-	5.8	-	-	-	-	-
58	-	0.0	-	4.2	3.4	-	10.0	-	-	-	-	-
59	-	1.7	-	5.0	3.4	-	2.5	-	-	-	-	-
60	-	0.4	-	3.3	5.1	-	5.0	-	-	-	-	-
61	-	3.4	-	1.7	6.3	-	5.0	-	-	-	-	-
62	-	4.2	-	5.0	4.6	-	0.8	-	-	-	-	-
63	-	3.4	-	4.2	2.3	-	0.8	-	-	-	-	-
64	-	5.5	-	3.3	2.9	-	0.8	-	-	-	-	-
65	-	7.2	-	2.5	7.4	-	2.5	-	-	-	-	-
66	-	7.6	-	1.7	4.6	-	0.0	-	-	-	-	-
67	-	7.2	-	1.7	3.4	-	0.8	-	-	-	-	-
68	-	8.1	-	0.0	5.1	-	0.0	-	-	-	-	-
69	-	4.7	-	4.2	4.6	-	1.7	-	-	-	-	-
70	-	4.2	-	2.5	1.7	-	0.8	-	-	-	-	-
71	-	3.8	-	0.8	2.3	-	0.0	-	-	-	-	-
72	-	3.0	-	0.8	1.7	-	0.8	-	-	-	-	-
73	-	5.1	-	1.7	0.6	-	0.8	-	-	-	-	-
74	-	2.5	-	1.7	0.6	-	0.8	-	-	-	-	-
75	-	8.1	-	1.7	1.7	-	-	-	-	-	-	-
76	-	2.5	-	-	1.1	-	-	-	-	-	-	-
77	-	2.5	-	-	0.6	-	-	-	-	-	-	-
78	-	1.7	-	-	-	-	-	-	-	-	-	-
79	-	2.1	-	-	-	-	-	-	-	-	-	-
80	-	0.4	-	-	-	-	-	-	-	-	-	-
81	-	1.7	-	-	-	-	-	-	-	-	-	-
82	-	0.4	-	-	-	-	-	-	-	-	-	-
83	-	0.4	-	-	-	-	-	-	-	-	-	-
TOTAL	0	236	0	120	175	0	120	0	0	0	0	0

Table 26. Length-frequency distribution (in percent) of Pacific cod from MSA 14, October-December, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
39	0.2	-	-	-	-	-	-	-	-	-	-	-
40	0.0	-	-	-	-	-	-	-	-	-	-	-
41	0.2	-	-	-	-	-	-	-	-	-	-	-
42	0.0	-	-	-	-	-	-	-	-	-	-	-
43	0.2	-	-	-	-	-	-	-	-	-	-	-
44	0.2	-	-	-	-	-	-	-	-	-	-	-
45	0.0	-	-	-	-	-	-	-	-	-	-	-
46	0.0	0.8	-	-	-	-	-	-	-	-	-	-
47	0.2	0.0	-	-	-	-	-	-	-	-	-	-
48	0.0	0.8	-	-	-	-	-	-	-	-	-	-
49	0.3	0.8	-	-	-	-	-	-	-	-	-	-
50	0.3	0.8	-	-	-	-	-	-	-	-	-	-
51	0.7	1.5	-	5.0	-	-	-	-	-	-	-	-
52	0.8	2.3	-	3.3	-	-	-	-	-	-	-	-
53	1.2	1.5	-	5.0	-	-	-	-	-	-	-	-
54	3.2	4.5	-	5.8	-	-	-	-	-	-	-	-
55	2.7	4.5	-	6.7	-	-	-	-	-	-	-	-
56	4.9	5.3	-	4.2	-	-	-	-	-	-	-	-
57	5.4	10.5	-	5.8	-	-	-	-	-	-	-	-
58	5.4	4.5	-	9.2	-	-	-	-	-	-	-	-
59	6.8	5.3	-	5.0	-	-	-	-	-	-	-	-
60	6.3	6.0	-	2.5	-	-	-	-	-	-	-	-
61	6.8	5.3	-	2.5	-	-	-	-	-	-	-	-
62	6.4	3.0	-	5.0	-	-	-	-	-	-	-	-
63	7.1	2.3	-	6.7	-	-	-	-	-	-	-	-
64	4.9	1.5	-	5.0	-	-	-	-	-	-	-	-
65	3.7	3.0	-	5.0	-	-	-	-	-	-	-	-
66	3.6	3.0	-	5.8	-	-	-	-	-	-	-	-
67	2.7	5.3	-	2.5	-	-	-	-	-	-	-	-
68	2.4	1.5	-	4.2	-	-	-	-	-	-	-	-
69	2.7	2.3	-	1.7	-	-	-	-	-	-	-	-
70	2.2	6.0	-	4.2	-	-	-	-	-	-	-	-
71	2.7	3.8	-	0.8	-	-	-	-	-	-	-	-
72	3.4	4.5	-	0.0	-	-	-	-	-	-	-	-
73	3.2	1.5	-	0.8	-	-	-	-	-	-	-	-
74	1.7	3.8	-	0.0	-	-	-	-	-	-	-	-
75	1.2	0.8	-	0.8	-	-	-	-	-	-	-	-
76	1.2	0.8	-	0.8	-	-	-	-	-	-	-	-
77	1.5	0.0	-	0.0	-	-	-	-	-	-	-	-
78	0.8	2.3	-	0.0	-	-	-	-	-	-	-	-
79	0.7	0.0	-	0.0	-	-	-	-	-	-	-	-
80	0.8	0.8	-	0.8	-	-	-	-	-	-	-	-
81	0.5	-	-	0.0	-	-	-	-	-	-	-	-
82	0.5	-	-	0.0	-	-	-	-	-	-	-	-
83	0.0	-	-	0.0	-	-	-	-	-	-	-	-
84	0.2	-	-	0.0	-	-	-	-	-	-	-	-
85	-	-	-	0.0	-	-	-	-	-	-	-	-
86	-	-	-	0.0	-	-	-	-	-	-	-	-
87	-	-	-	0.8	-	-	-	-	-	-	-	-
TOTAL	590	133	0	120	0	0	0	0	0	0	0	0

Table 27. Length-frequency distribution (in percent) of Pacific cod from Gulf Islands(MSAs 17&18), January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
34	-	0.1	-	-	-	0.3	-	-	-	-	-	-
35	-	0.3	-	-	-	0.0	-	-	-	-	-	-
36	-	1.4	-	-	-	0.0	-	-	-	-	-	-
37	-	2.0	-	-	-	0.0	-	-	-	-	-	-
38	-	3.1	-	-	0.2	0.3	-	-	-	-	-	-
39	-	4.3	-	0.2	0.2	0.3	-	-	-	-	-	-
40	-	6.0	1.7	1.0	0.4	0.0	-	-	-	-	-	-
41	0.2	5.4	2.6	2.0	0.6	0.3	-	-	-	-	-	-
42	0.2	7.0	2.0	2.6	1.5	1.5	-	-	-	-	-	-
43	2.7	8.9	4.2	5.3	2.5	1.2	-	-	-	-	-	-
44	1.9	10.5	5.2	7.7	4.8	0.6	-	-	-	-	-	-
45	2.2	11.5	5.3	8.1	5.0	2.9	-	-	-	-	-	-
46	3.9	10.1	4.6	6.7	5.2	3.8	-	-	-	-	-	-
47	4.8	7.0	3.5	6.3	5.4	4.1	-	-	-	-	-	-
48	7.0	7.3	2.5	4.5	3.5	4.1	-	-	-	-	-	-
49	8.9	4.8	3.7	3.5	5.4	4.7	-	-	-	-	-	-
50	6.5	2.6	4.4	4.1	2.5	2.3	-	-	-	-	-	-
51	6.8	1.7	4.1	2.0	2.9	5.2	-	-	-	-	-	-
52	7.0	0.9	6.5	1.2	2.9	2.0	-	-	-	-	-	-
53	5.8	0.6	5.7	1.0	4.6	3.5	-	-	-	-	-	-
54	2.4	0.4	5.7	1.8	4.4	3.5	-	-	-	-	-	-
55	3.4	0.2	5.5	1.2	3.9	2.0	-	-	-	-	-	-
56	3.1	0.2	6.0	1.6	5.4	4.4	-	-	-	-	-	-
57	2.2	0.1	4.9	3.5	6.0	4.4	-	-	-	-	-	-
58	0.7	0.0	3.1	3.7	4.4	3.8	-	-	-	-	-	-
59	1.0	0.0	3.8	2.6	3.3	3.8	-	-	-	-	-	-
60	0.7	0.3	2.6	3.0	2.5	4.4	-	-	-	-	-	-
61	2.4	0.2	2.6	2.6	3.9	2.0	-	-	-	-	-	-
62	3.6	0.3	2.7	4.1	2.5	4.7	-	-	-	-	-	-
63	2.4	0.4	0.8	0.8	2.7	3.8	-	-	-	-	-	-
64	3.1	0.4	0.7	2.0	1.0	4.4	-	-	-	-	-	-
65	2.9	0.2	1.2	1.6	2.1	3.8	-	-	-	-	-	-
66	1.9	0.3	0.7	2.2	1.0	3.8	-	-	-	-	-	-
67	2.2	0.1	0.6	1.2	1.2	1.5	-	-	-	-	-	-
68	1.4	0.1	0.4	2.6	1.2	2.3	-	-	-	-	-	-
69	2.2	0.3	0.1	1.4	0.6	2.0	-	-	-	-	-	-
70	1.2	0.1	0.6	1.4	0.6	1.5	-	-	-	-	-	-
71	1.0	0.1	0.2	2.2	0.6	1.7	-	-	-	-	-	-
72	0.5	0.0	0.3	0.2	0.4	1.5	-	-	-	-	-	-
73	0.2	0.0	0.5	0.8	0.2	1.2	-	-	-	-	-	-
74	1.0	0.1	0.1	0.6	0.6	1.2	-	-	-	-	-	-
75	1.0	0.2	0.4	0.4	0.6	0.6	-	-	-	-	-	-
76	0.7	0.1	0.3	0.2	1.0	0.6	-	-	-	-	-	-
77	0.5	0.0	0.0	0.0	0.4	0.3	-	-	-	-	-	-
78	0.2	0.0	0.0	0.2	0.2	0.0	-	-	-	-	-	-
79	-	0.1	0.0	0.0	0.4	0.0	-	-	-	-	-	-
80	-	0.0	0.1	0.2	0.0	0.0	-	-	-	-	-	-
81	-	0.0	0.0	0.2	0.0	0.0	-	-	-	-	-	-
82	-	0.0	0.0	0.2	0.4	0.0	-	-	-	-	-	-
83	-	0.0	0.0	0.4	0.2	0.0	-	-	-	-	-	-
84	-	0.0	0.0	0.0	0.2	0.3	-	-	-	-	-	-
85	-	0.0	0.0	0.2	0.0	-	-	-	-	-	-	-
86	-	0.2	0.0	0.0	0.2	-	-	-	-	-	-	-
87	-	0.0	0.1	0.2	-	-	-	-	-	-	-	-
88	-	0.1	0.1	-	-	-	-	-	-	-	-	-
89	-	0.0	-	-	-	-	-	-	-	-	-	-
90	-	0.0	-	-	-	-	-	-	-	-	-	-
91	-	0.1	-	-	-	-	-	-	-	-	-	-
TOTAL	414	1183	1071	492	482	344	0	0	0	0	0	0

Table 28. Length-frequency distribution (in percent) of Pacific cod from Gulf Islands(MSAs 17&18), April-June, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
41	0.6	0.6	-	-	-	-	-	-	-	-	-	-
42	0.0	0.6	-	-	-	-	-	-	-	-	-	-
43	0.0	2.8	-	-	1.0	-	-	-	-	-	-	-
44	0.0	5.6	-	-	0.5	-	-	-	-	-	-	-
45	1.2	13.7	-	-	1.0	-	-	-	-	-	-	-
46	0.0	14.6	-	-	2.0	-	-	-	-	-	-	-
47	5.4	14.6	-	-	3.0	-	-	-	-	-	-	-
48	3.0	11.5	-	-	1.0	-	-	-	-	-	-	-
49	2.4	9.7	-	-	3.5	-	-	-	-	-	-	-
50	5.4	8.4	-	-	2.0	-	-	-	-	-	-	-
51	8.4	6.2	-	-	6.6	-	-	-	-	-	-	-
52	7.2	5.6	-	-	3.0	-	-	-	-	-	-	-
53	7.2	0.9	-	-	5.6	-	-	-	-	-	-	-
54	5.4	0.3	-	-	4.0	-	-	-	-	-	-	-
55	4.2	0.6	-	-	11.1	-	-	-	-	-	-	-
56	3.0	0.0	-	-	8.6	-	-	-	-	-	-	-
57	2.4	0.3	-	-	6.1	-	-	-	-	-	-	-
58	2.4	0.6	-	-	7.1	-	-	-	-	-	-	-
59	0.6	0.3	-	-	7.1	-	-	-	-	-	-	-
60	0.6	0.3	-	-	3.5	-	-	-	-	-	-	-
61	1.2	0.6	-	-	3.0	-	-	-	-	-	-	-
62	3.0	0.0	-	-	4.5	-	-	-	-	-	-	-
63	1.8	0.3	-	-	2.0	-	-	-	-	-	-	-
64	4.2	0.0	-	-	1.5	-	-	-	-	-	-	-
65	7.2	0.0	-	-	1.5	-	-	-	-	-	-	-
66	4.2	0.0	-	-	1.0	-	-	-	-	-	-	-
67	4.8	0.6	-	-	1.0	-	-	-	-	-	-	-
68	1.8	0.3	-	-	2.0	-	-	-	-	-	-	-
69	1.8	0.0	-	-	1.0	-	-	-	-	-	-	-
70	1.8	0.3	-	-	0.5	-	-	-	-	-	-	-
71	0.6	0.0	-	-	0.0	-	-	-	-	-	-	-
72	0.0	0.0	-	-	1.0	-	-	-	-	-	-	-
73	0.0	0.0	-	-	1.5	-	-	-	-	-	-	-
74	1.2	0.0	-	-	0.0	-	-	-	-	-	-	-
75	1.2	0.0	-	-	0.0	-	-	-	-	-	-	-
76	1.2	0.0	-	-	0.5	-	-	-	-	-	-	-
77	1.2	0.0	-	-	0.5	-	-	-	-	-	-	-
78	0.0	0.0	-	-	0.5	-	-	-	-	-	-	-
79	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-
80	0.6	0.3	-	-	0.5	-	-	-	-	-	-	-
81	0.6	-	-	-	0.0	-	-	-	-	-	-	-
82	0.6	-	-	-	0.0	-	-	-	-	-	-	-
83	0.6	-	-	-	0.0	-	-	-	-	-	-	-
84	0.6	-	-	-	0.0	-	-	-	-	-	-	-
85	-	-	-	-	0.0	-	-	-	-	-	-	-
86	-	-	-	-	0.5	-	-	-	-	-	-	-
TOTAL	166	321	0	0	198	0	0	0	0	0	0	0

Table 29. Length-frequency distribution (in percent) of Pacific cod from MSA 19, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
34	-	-	-	-	-	-	-	-	-	0.5	-	-
35	-	-	-	-	-	-	-	-	-	0.5	-	-
36	-	-	-	-	-	-	-	-	-	0.5	-	-
37	-	-	-	-	-	-	-	-	-	4.7	-	-
38	-	-	-	-	-	-	-	-	-	3.6	-	-
39	-	-	-	-	-	-	-	0.8	0.4	6.3	-	-
40	-	-	-	-	-	-	-	10.0	0.4	10.9	-	-
41	-	-	-	-	-	-	0.8	5.8	1.3	10.4	-	-
42	-	-	-	-	0.4	2.6	0.8	11.7	0.4	12.5	-	-
43	-	-	-	-	1.7	0.0	0.0	9.2	2.1	12.5	-	-
44	-	-	-	-	2.1	1.7	9.2	13.3	3.8	7.3	-	-
45	-	-	-	-	3.8	8.5	10.0	9.2	2.9	9.4	-	-
46	-	-	-	-	5.4	6.0	14.2	5.8	3.8	3.6	-	-
47	-	-	-	-	2.5	5.1	15.0	7.5	2.1	2.6	-	-
48	-	-	-	-	2.5	7.7	9.2	2.5	5.0	0.0	-	-
49	-	-	-	-	4.2	8.5	6.7	2.5	2.9	1.0	-	-
50	-	-	-	-	2.1	12.8	4.2	1.7	4.6	0.0	-	-
51	-	-	-	-	6.3	6.8	2.5	3.3	7.1	0.0	-	-
52	-	-	-	-	6.7	3.4	0.8	0.0	10.4	0.0	-	-
53	-	-	-	-	10.4	1.7	2.5	0.8	11.3	1.6	-	-
54	-	-	-	-	6.7	5.1	0.0	1.7	10.0	0.5	-	-
55	-	-	-	-	8.3	0.0	0.0	1.7	5.8	0.5	-	-
56	-	-	-	-	6.7	4.3	1.7	2.5	7.1	0.5	-	-
57	-	-	-	-	3.3	1.7	1.7	0.0	5.0	0.0	-	-
58	-	-	-	-	3.3	0.9	2.5	0.8	3.3	1.6	-	-
59	-	-	-	-	4.6	0.9	0.8	0.8	2.1	1.0	-	-
60	-	-	-	-	1.3	3.4	0.8	2.5	2.1	2.1	-	-
61	-	-	-	-	4.2	2.6	2.5	0.8	1.7	0.5	-	-
62	-	-	-	-	3.3	5.1	1.7	1.7	1.3	0.5	-	-
63	-	-	-	-	1.3	0.9	0.8	0.0	0.4	1.0	-	-
64	-	-	-	-	0.8	1.7	5.0	0.8	0.4	1.0	-	-
65	-	-	-	-	0.4	0.9	1.7	0.0	0.8	0.0	-	-
66	-	-	-	-	1.3	0.0	0.8	0.0	0.8	1.0	-	-
67	-	-	-	-	0.4	1.7	0.0	0.0	0.0	0.5	-	-
68	-	-	-	-	0.8	0.9	0.8	0.0	0.0	0.0	-	-
69	-	-	-	-	0.8	0.9	0.0	0.8	0.0	0.5	-	-
70	-	-	-	-	0.4	0.0	0.0	0.0	0.4	0.0	-	-
71	-	-	-	-	0.8	0.0	0.0	0.0	0.0	0.0	-	-
72	-	-	-	-	0.0	0.0	0.8	0.0	0.0	0.0	-	-
73	-	-	-	-	0.8	0.0	0.0	0.0	0.0	0.5	-	-
74	-	-	-	-	1.3	0.0	0.0	0.0	0.0	-	-	-
75	-	-	-	-	0.0	0.9	0.0	0.0	0.0	-	-	-
76	-	-	-	-	0.0	0.9	0.0	0.8	0.0	-	-	-
77	-	-	-	-	0.4	0.9	0.8	0.0	0.4	-	-	-
78	-	-	-	-	0.4	0.0	0.8	0.8	-	-	-	-
79	-	-	-	-	0.0	0.0	0.0	-	-	-	-	-
80	-	-	-	-	0.0	0.9	0.0	-	-	-	-	-
81	-	-	-	-	0.0	0.9	0.0	-	-	-	-	-
82	-	-	-	-	0.0	-	0.0	-	-	-	-	-
83	-	-	-	-	0.0	-	0.8	-	-	-	-	-
84	-	-	-	-	0.0	-	-	-	-	-	-	-
85	-	-	-	-	0.4	-	-	-	-	-	-	-
TOTAL	0	0	0	0	240	117	120	120	240	192	0	0

Table 30. Length-frequency distribution (in percent) of Pacific cod from MSA 19, July-September, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
30	-	-	-	-	-	-	0.1	-	-	-	-	-
31	-	-	-	-	-	-	0.0	-	-	-	-	-
32	-	-	-	-	-	-	0.0	-	-	-	-	-
33	-	-	-	-	-	-	0.0	-	-	-	-	-
34	-	-	-	-	-	-	0.1	-	-	-	-	-
35	-	-	-	-	-	-	0.0	-	-	-	-	-
36	-	-	-	-	-	-	0.0	-	-	0.1	-	-
37	-	-	-	-	0.2	-	0.1	-	-	0.0	-	-
38	-	-	-	-	0.2	-	0.3	0.6	-	0.1	-	-
39	-	-	-	-	0.2	-	0.0	0.3	-	0.4	-	-
40	-	-	-	0.4	0.6	-	0.3	1.7	-	0.7	-	-
41	-	-	-	0.0	0.5	-	0.1	0.3	-	0.1	-	-
42	-	-	-	0.0	0.3	-	0.8	2.8	-	0.8	-	-
43	-	-	-	0.4	0.2	-	1.0	3.9	-	0.6	-	-
44	-	-	0.8	0.8	0.5	-	0.9	3.3	-	1.6	-	-
45	-	-	0.4	1.7	0.6	-	1.7	4.7	-	1.7	-	-
46	-	-	0.4	2.5	0.8	-	3.8	5.0	-	2.1	-	-
47	0.5	-	0.0	1.3	1.4	1.7	4.2	4.7	-	3.7	-	-
48	0.0	-	0.8	2.5	0.9	0.0	4.1	6.7	-	4.5	-	-
49	0.0	-	1.6	5.0	1.8	0.8	6.3	4.7	-	4.8	-	-
50	0.5	-	2.4	4.2	2.1	2.5	7.3	5.8	-	7.1	-	-
51	0.9	-	1.2	5.8	4.0	3.3	7.1	6.1	-	7.9	-	-
52	1.9	-	6.1	5.8	3.7	8.3	7.1	6.7	-	6.5	-	-
53	2.8	-	4.0	5.0	3.1	5.0	7.1	4.4	-	6.9	-	-
54	1.4	-	4.5	4.6	2.9	9.2	5.0	3.1	-	7.6	-	-
55	1.9	-	6.9	3.3	6.4	8.3	5.4	1.9	-	5.1	-	-
56	2.8	-	2.8	2.5	5.0	10.0	4.8	2.2	-	4.5	-	-
57	3.8	-	7.7	1.7	5.3	8.3	4.1	2.5	-	2.5	-	-
58	7.6	-	7.3	1.7	4.1	4.2	1.4	0.8	-	1.7	-	-
59	5.2	-	5.7	1.7	3.1	4.2	2.3	1.4	-	1.1	-	-
60	5.2	-	5.7	3.8	5.0	2.5	2.3	3.3	-	1.1	-	-
61	4.7	-	8.5	2.1	4.6	1.7	1.2	2.8	-	1.3	-	-
62	4.3	-	5.7	2.9	4.0	3.3	0.9	2.8	-	0.8	-	-
63	2.4	-	4.9	2.5	4.4	4.2	0.8	3.1	-	1.3	-	-
64	1.4	-	2.8	4.6	4.1	2.5	1.3	2.8	-	2.1	-	-
65	2.8	-	2.8	3.3	4.6	4.2	2.3	0.8	-	1.4	-	-
66	2.8	-	2.4	3.3	3.1	1.7	1.5	2.5	-	2.3	-	-
67	5.7	-	2.8	3.8	4.0	3.3	2.0	0.6	-	2.1	-	-
68	4.3	-	1.2	5.8	2.1	2.5	0.9	1.4	-	1.8	-	-
69	6.2	-	0.4	3.8	1.8	1.7	1.2	0.6	-	2.1	-	-
70	6.2	-	0.4	1.7	1.2	1.7	1.5	1.1	-	1.3	-	-
71	5.7	-	2.4	2.5	1.2	2.5	1.7	0.6	-	1.3	-	-
72	4.3	-	0.4	2.9	1.7	0.8	0.8	0.6	-	1.7	-	-
73	2.8	-	0.0	1.7	2.0	0.8	1.1	0.6	-	1.3	-	-
74	2.4	-	1.2	2.1	0.8	0.0	0.9	0.8	-	1.6	-	-
75	1.9	-	0.8	0.4	1.1	0.0	0.4	0.6	-	0.8	-	-
76	2.4	-	0.0	0.0	1.5	0.0	1.0	0.0	-	0.7	-	-
77	1.4	-	0.8	0.4	1.2	0.0	0.6	0.0	-	0.6	-	-
78	0.9	-	1.2	0.8	0.6	0.0	0.3	0.6	-	0.1	-	-
79	0.9	-	1.6	0.0	0.6	0.0	0.6	0.0	-	0.3	-	-
80	0.9	-	0.4	0.0	1.2	0.0	0.4	0.3	-	0.3	-	-
81	0.0	-	0.4	0.0	0.5	0.0	0.4	0.0	-	0.4	-	-
82	0.5	-	0.0	0.0	0.3	0.0	0.2	0.6	-	0.3	-	-
83	0.0	-	0.0	0.8	0.3	0.8	0.3	0.3	-	0.4	-	-
84	0.5	-	0.0	-	0.5	-	0.0	-	-	0.3	-	-
85	-	-	0.0	-	-	-	0.2	-	-	0.0	-	-
86	-	-	0.4	-	-	-	0.0	-	-	0.1	-	-
87	-	-	-	-	-	-	0.0	-	-	-	-	-
88	-	-	-	-	-	-	0.1	-	-	-	-	-
TOTAL	211	0	247	240	655	120	1063	360	0	709	0	0

Table 31. Length-frequency distribution (in percent) of Pacific cod from MSA 19, October-December, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
31	-	-	-	-	-	-	-	-	-	0.2	-	-
32	-	-	-	-	-	-	-	-	-	0.0	-	-
33	-	-	-	-	-	-	-	-	-	0.2	-	-
34	-	-	-	-	-	-	-	-	-	0.9	-	-
35	-	-	-	-	-	-	-	0.2	0.6	3.6	-	-
36	-	-	-	-	-	-	-	0.7	0.9	6.0	0.8	-
37	-	-	-	-	-	-	-	0.7	2.4	8.5	1.3	-
38	-	-	-	-	-	0.1	-	0.8	4.5	6.9	1.5	-
39	-	-	-	0.1	-	0.0	-	0.3	6.4	6.7	2.5	-
40	-	-	-	0.2	-	0.9	-	1.2	10.1	4.0	2.0	-
41	-	-	-	0.5	0.3	1.9	2.5	2.2	7.7	2.7	0.0	-
42	-	-	0.8	1.1	1.0	2.2	2.5	3.7	12.4	1.6	1.3	-
43	-	-	0.0	1.2	2.9	2.4	1.7	3.8	6.4	2.2	2.0	-
44	-	0.7	0.4	1.7	2.4	5.4	5.8	5.3	3.9	0.7	4.8	-
45	-	2.0	0.4	2.7	3.7	4.7	6.7	4.0	2.6	0.9	4.5	-
46	-	3.4	0.8	3.3	4.3	4.3	3.3	4.5	0.9	1.6	6.3	-
47	-	3.6	0.4	3.2	2.9	2.8	6.7	6.5	0.6	0.7	7.8	-
48	-	3.4	0.8	4.4	1.4	2.7	0.8	6.8	0.2	2.7	9.0	-
49	-	7.5	0.8	7.2	1.6	1.3	0.8	6.8	0.4	0.9	8.3	-
50	-	8.0	1.7	8.0	1.3	1.8	5.0	9.8	0.4	4.5	6.8	-
51	-	10.0	3.3	10.0	1.8	1.3	2.5	8.3	1.1	2.7	6.0	-
52	-	8.2	5.8	7.7	2.0	1.4	0.8	8.0	0.6	5.1	6.0	-
53	-	7.7	3.8	7.5	3.0	2.3	4.2	5.0	1.1	4.7	4.3	-
54	-	4.8	5.8	6.5	4.6	3.3	9.2	4.0	0.9	4.5	3.3	-
55	-	3.9	4.6	5.6	5.1	4.2	2.5	3.2	2.6	3.8	3.0	-
56	-	3.4	5.0	5.0	5.2	6.1	3.3	3.3	2.6	3.1	4.5	-
57	-	1.6	7.9	3.6	5.2	7.0	7.5	1.5	2.4	4.0	1.0	-
58	-	2.0	4.2	2.9	6.2	3.2	3.3	0.8	4.1	1.8	2.0	-
59	-	1.6	8.8	2.0	5.4	5.6	3.3	0.7	2.6	1.1	1.8	-
60	-	1.6	6.7	1.7	4.6	4.2	5.0	1.2	2.8	0.9	2.0	-
61	-	0.2	5.8	1.1	4.8	4.7	3.3	1.3	3.6	0.9	1.0	-
62	-	1.8	3.8	1.1	5.4	2.8	3.3	0.3	2.6	0.4	1.5	-
63	-	1.8	2.9	0.8	2.9	2.8	3.3	0.2	3.6	1.3	0.8	-
64	-	1.1	6.3	1.1	3.1	2.9	0.0	0.8	1.1	1.1	0.8	-
65	-	1.8	4.6	0.3	3.8	2.4	0.8	0.7	2.8	0.4	1.0	-
66	-	1.4	3.8	0.6	3.9	2.8	0.0	0.7	1.3	1.3	0.3	-
67	-	2.0	2.5	1.1	1.8	1.1	0.0	0.3	0.6	1.1	0.8	-
68	-	2.5	2.1	1.4	2.9	1.8	0.8	0.3	1.1	0.4	0.3	-
69	-	1.4	2.1	0.8	1.3	0.6	0.0	0.2	0.6	1.6	0.3	-
70	-	2.3	0.8	1.2	0.9	1.0	1.7	0.5	0.4	1.3	0.0	-
71	-	1.6	0.0	1.4	1.0	1.3	2.5	0.2	0.2	0.4	0.3	-
72	-	1.4	0.0	0.4	0.5	1.1	0.0	0.2	0.0	0.4	0.5	-
73	-	2.0	0.0	1.2	0.4	0.8	3.3	0.0	0.0	1.1	0.0	-
74	-	0.7	0.8	0.3	0.7	1.1	0.8	0.2	0.0	0.4	0.3	-
75	-	1.4	0.4	0.5	0.1	0.5	0.8	0.3	0.0	0.0	0.0	-
76	-	0.9	0.4	0.2	0.4	0.5	0.0	0.2	0.2	0.0	0.0	-
77	-	0.5	0.8	0.2	0.3	0.1	0.8	0.2	0.0	0.0	0.0	-
78	-	0.5	0.4	0.1	0.0	0.3	0.8	-	0.2	0.2	0.0	-
79	-	0.5	0.0	0.1	0.3	0.4	-	-	0.0	0.0	0.0	-
80	-	0.2	0.0	0.0	0.0	0.3	-	-	0.0	0.2	0.0	-
81	-	0.0	0.0	0.3	0.0	0.1	-	-	0.2	0.2	0.3	-
82	-	0.5	0.0	0.1	0.0	0.4	-	-	0.0	-	-	-
83	-	0.0	0.0	0.0	0.1	0.1	-	-	0.0	-	-	-
84	-	0.2	0.0	0.0	0.3	0.1	-	-	0.2	-	-	-
85	-	-	0.4	0.1	0.0	0.3	-	-	-	-	-	-
86	-	-	-	-	0.0	0.1	-	-	-	-	-	-
87	-	-	-	-	0.1	0.0	-	-	-	-	-	-
88	-	-	-	-	-	0.0	-	-	-	-	-	-
89	-	-	-	-	-	0.1	-	-	-	-	-	-
TOTAL	0	440	240	1332	763	783	120	599	466	449	400	0

Table 32. Length-frequency distribution (in percent) of Pacific cod from MSA 20, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
39	-	-	-	-	0.8	-	-	-	-	-	-	-
40	-	-	-	-	0.0	0.2	-	-	-	-	-	-
41	-	-	-	-	0.0	0.0	-	-	0.4	-	-	-
42	-	-	-	-	0.0	0.0	-	-	1.8	-	-	-
43	-	-	-	-	0.0	0.0	0.4	-	0.0	-	-	0.6
44	-	-	-	-	0.0	0.0	0.0	-	1.1	-	-	0.6
45	-	-	-	-	0.0	0.0	0.0	-	1.1	-	-	0.6
46	-	-	-	-	0.8	1.0	0.4	-	0.7	-	-	0.0
47	-	-	-	-	0.8	0.0	0.0	-	1.1	-	-	1.7
48	-	-	-	-	1.7	0.2	0.8	-	1.8	-	-	0.0
49	-	-	-	-	1.7	0.5	0.8	-	1.4	-	-	1.7
50	-	-	-	-	4.2	1.2	0.4	-	1.8	-	-	2.8
51	-	-	-	-	4.2	2.0	0.4	-	1.8	-	-	4.4
52	-	-	-	-	7.5	1.2	0.4	-	4.0	-	-	6.1
53	-	-	-	-	3.3	1.2	1.6	-	7.9	-	-	2.8
54	-	-	-	-	3.3	3.5	2.0	-	5.8	-	-	3.9
55	-	-	-	-	6.7	5.4	2.4	-	6.5	-	-	5.5
56	-	-	-	-	0.0	4.4	2.9	-	6.1	-	-	5.0
57	-	-	-	-	2.5	4.2	3.7	-	5.8	-	-	6.6
58	-	-	-	-	5.8	3.2	3.7	-	4.0	-	-	3.9
59	-	-	-	-	5.8	4.2	4.5	-	6.5	-	-	2.8
60	-	-	-	-	2.5	4.7	6.5	-	5.0	-	-	5.5
61	-	-	-	-	5.0	5.7	6.9	-	6.5	-	-	8.8
62	-	-	-	-	2.5	6.4	5.3	-	4.7	-	-	5.0
63	-	-	-	-	5.0	7.4	5.3	-	5.0	-	-	1.7
64	-	-	-	-	9.2	6.2	5.7	-	4.0	-	-	2.2
65	-	-	-	-	2.5	5.9	2.4	-	3.6	-	-	3.9
66	-	-	-	-	3.3	3.7	5.7	-	0.7	-	-	4.4
67	-	-	-	-	0.8	4.2	3.7	-	1.1	-	-	3.3
68	-	-	-	-	4.2	3.2	4.1	-	1.4	-	-	2.8
69	-	-	-	-	1.7	3.5	1.2	-	1.1	-	-	2.2
70	-	-	-	-	4.2	3.7	5.3	-	1.1	-	-	2.2
71	-	-	-	-	0.8	1.2	3.3	-	1.4	-	-	1.1
72	-	-	-	-	0.8	1.2	3.3	-	1.1	-	-	1.7
73	-	-	-	-	1.7	2.2	3.3	-	0.7	-	-	1.1
74	-	-	-	-	3.3	1.0	1.2	-	0.4	-	-	1.1
75	-	-	-	-	1.7	1.5	2.9	-	0.0	-	-	1.1
76	-	-	-	-	0.8	1.0	2.9	-	0.7	-	-	1.1
77	-	-	-	-	0.8	1.0	0.8	-	0.0	-	-	1.1
78	-	-	-	-	-	0.2	1.2	-	1.4	-	-	0.6
79	-	-	-	-	-	1.0	1.6	-	0.4	-	-	0.6
80	-	-	-	-	-	0.0	1.6	-	0.4	-	-	-
81	-	-	-	-	-	0.2	0.4	-	-	-	-	-
82	-	-	-	-	-	0.5	0.4	-	-	-	-	-
83	-	-	-	-	-	0.5	0.4	-	-	-	-	-
84	-	-	-	-	-	0.0	-	-	-	-	-	-
85	-	-	-	-	-	0.5	-	-	-	-	-	-
86	-	-	-	-	-	0.5	-	-	-	-	-	-
87	-	-	-	-	-	0.2	-	-	-	-	-	-
TOTAL	0	0	0	0	120	405	245	0	278	0	0	181

Table 33. Length-frequency distribution (in percent) of Pacific cod from Nanoose Bay, January-March, 1974-85.

Length (cm)	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
38	0.2	-	-	-	-	-	-	-	-	-	-	-
39	0.5	0.5	-	-	-	-	-	-	-	-	-	-
40	0.8	0.2	-	-	-	-	-	-	-	-	-	-
41	1.4	0.0	-	-	-	-	-	-	-	-	-	-
42	2.4	1.2	-	-	-	-	-	-	-	-	-	-
43	2.4	2.4	-	-	0.7	0.3	-	-	-	-	-	-
44	2.6	4.6	-	-	0.9	0.9	-	-	-	-	-	-
45	3.2	3.1	-	-	2.2	1.2	-	-	-	-	-	-
46	2.9	4.6	-	-	1.5	2.3	-	-	-	-	-	-
47	3.2	2.2	-	-	2.7	2.0	-	-	-	-	-	-
48	2.8	3.9	-	-	2.0	1.7	-	-	-	-	-	-
49	2.1	4.3	-	-	3.1	3.2	-	-	-	-	-	-
50	2.8	2.4	-	-	1.8	2.6	-	-	-	-	-	-
51	1.8	2.7	-	-	4.4	3.5	-	-	-	-	-	-
52	2.6	2.4	-	-	7.5	3.2	-	-	-	-	-	-
53	2.2	4.1	-	-	9.1	4.3	-	-	-	-	-	-
54	2.6	4.6	-	-	6.4	3.7	-	-	-	-	-	-
55	2.3	3.6	-	-	7.5	4.6	-	-	-	-	-	-
56	2.7	6.0	-	-	8.0	5.2	-	-	-	-	-	-
57	4.2	7.7	-	-	7.1	6.3	-	-	-	-	-	-
58	2.9	3.9	-	-	6.0	6.1	-	-	-	-	-	-
59	2.1	5.1	-	-	5.3	6.1	-	-	-	-	-	-
60	3.1	3.6	-	-	4.6	4.3	-	-	-	-	-	-
61	4.5	4.3	-	-	4.0	3.7	-	-	-	-	-	-
62	3.4	2.7	-	-	2.0	6.1	-	-	-	-	-	-
63	4.5	5.1	-	-	1.5	4.3	-	-	-	-	-	-
64	4.1	2.4	-	-	0.9	5.5	-	-	-	-	-	-
65	3.9	1.0	-	-	2.4	3.2	-	-	-	-	-	-
66	5.1	1.9	-	-	0.9	3.7	-	-	-	-	-	-
67	3.2	1.9	-	-	1.8	3.7	-	-	-	-	-	-
68	2.5	1.9	-	-	0.9	0.9	-	-	-	-	-	-
69	2.9	0.2	-	-	1.1	0.9	-	-	-	-	-	-
70	2.7	1.2	-	-	1.3	1.2	-	-	-	-	-	-
71	1.7	0.0	-	-	0.4	0.9	-	-	-	-	-	-
72	1.3	1.2	-	-	0.4	1.7	-	-	-	-	-	-
73	1.1	1.7	-	-	0.7	0.0	-	-	-	-	-	-
74	1.3	0.2	-	-	0.2	0.6	-	-	-	-	-	-
75	1.2	0.2	-	-	0.2	0.9	-	-	-	-	-	-
76	0.5	0.2	-	-	0.2	0.3	-	-	-	-	-	-
77	0.6	0.2	-	-	0.0	0.0	-	-	-	-	-	-
78	0.5	0.2	-	-	0.0	0.0	-	-	-	-	-	-
79	0.3	0.0	-	-	0.2	0.0	-	-	-	-	-	-
80	0.1	0.2	-	-	-	0.6	-	-	-	-	-	-
81	0.3	-	-	-	-	0.0	-	-	-	-	-	-
82	0.1	-	-	-	-	0.3	-	-	-	-	-	-
83	0.1	-	-	-	-	0.0	-	-	-	-	-	-
84	0.2	-	-	-	-	0.3	-	-	-	-	-	-
TOTAL	1038	415	0	0	452	347	0	0	0	0	0	0

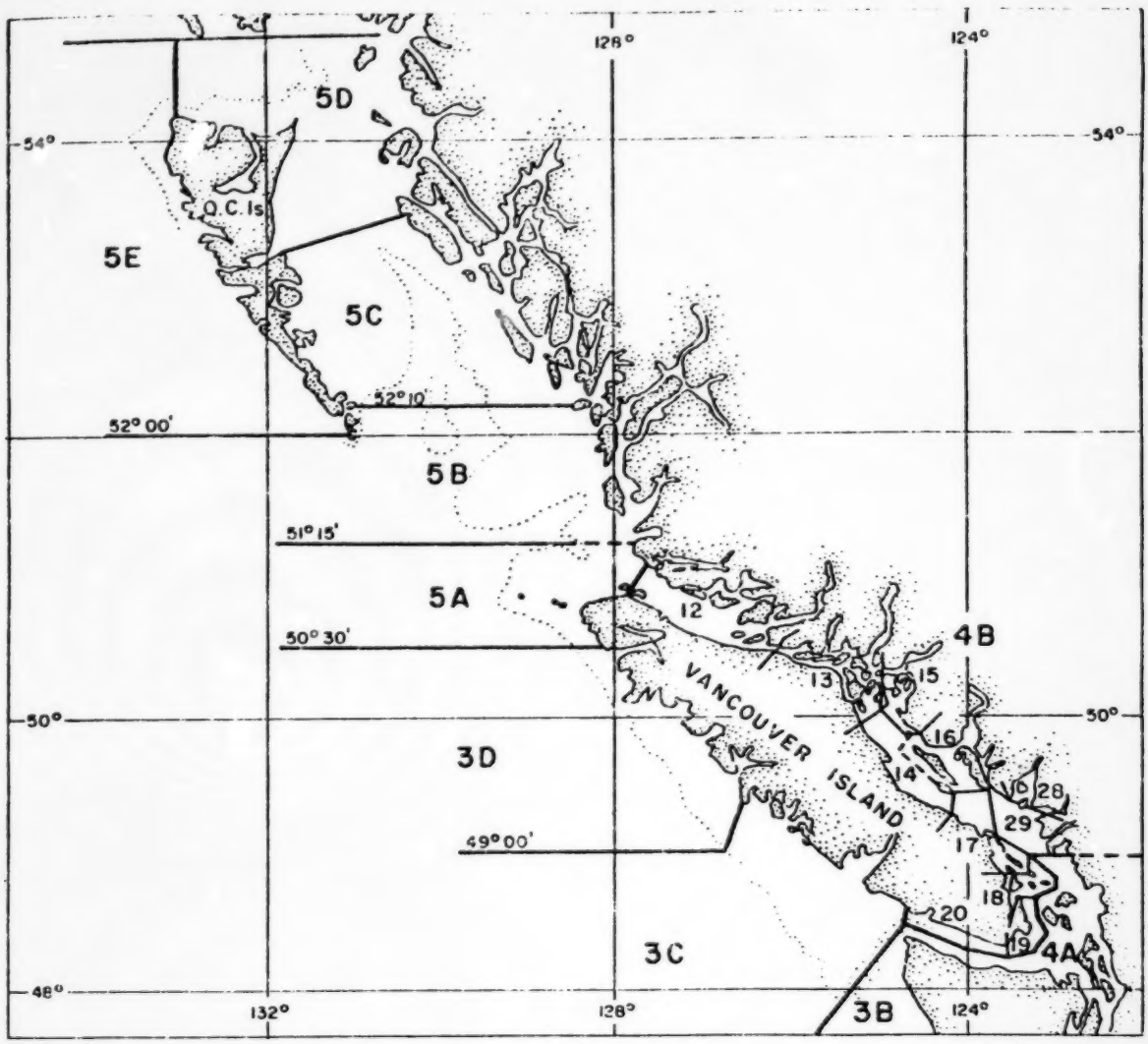

Fig. 1. Major statistical areas for Canada-U.S. trawl landings of groundfish.

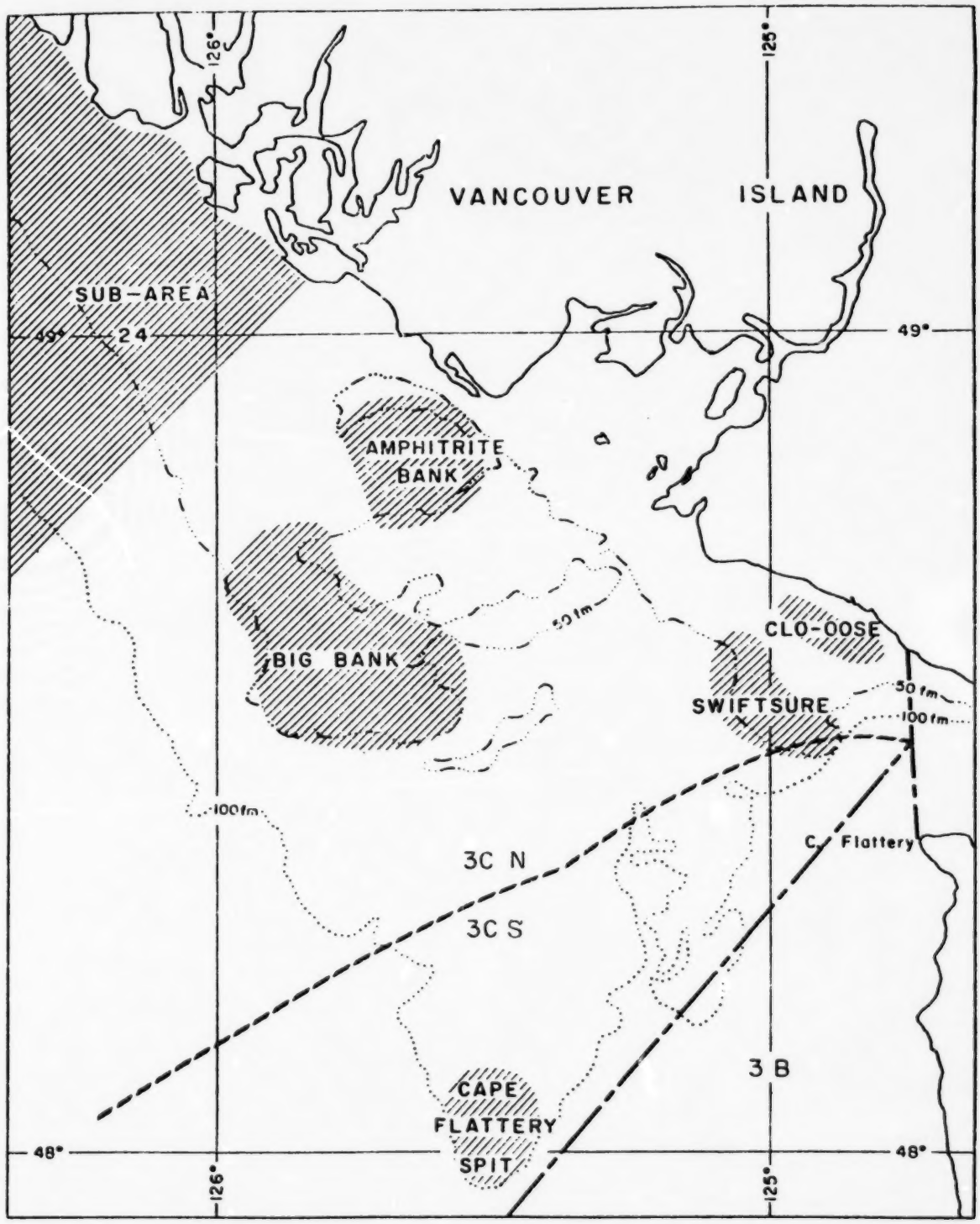

Fig. 2. Major trawling grounds off southwest Vancouver Island.

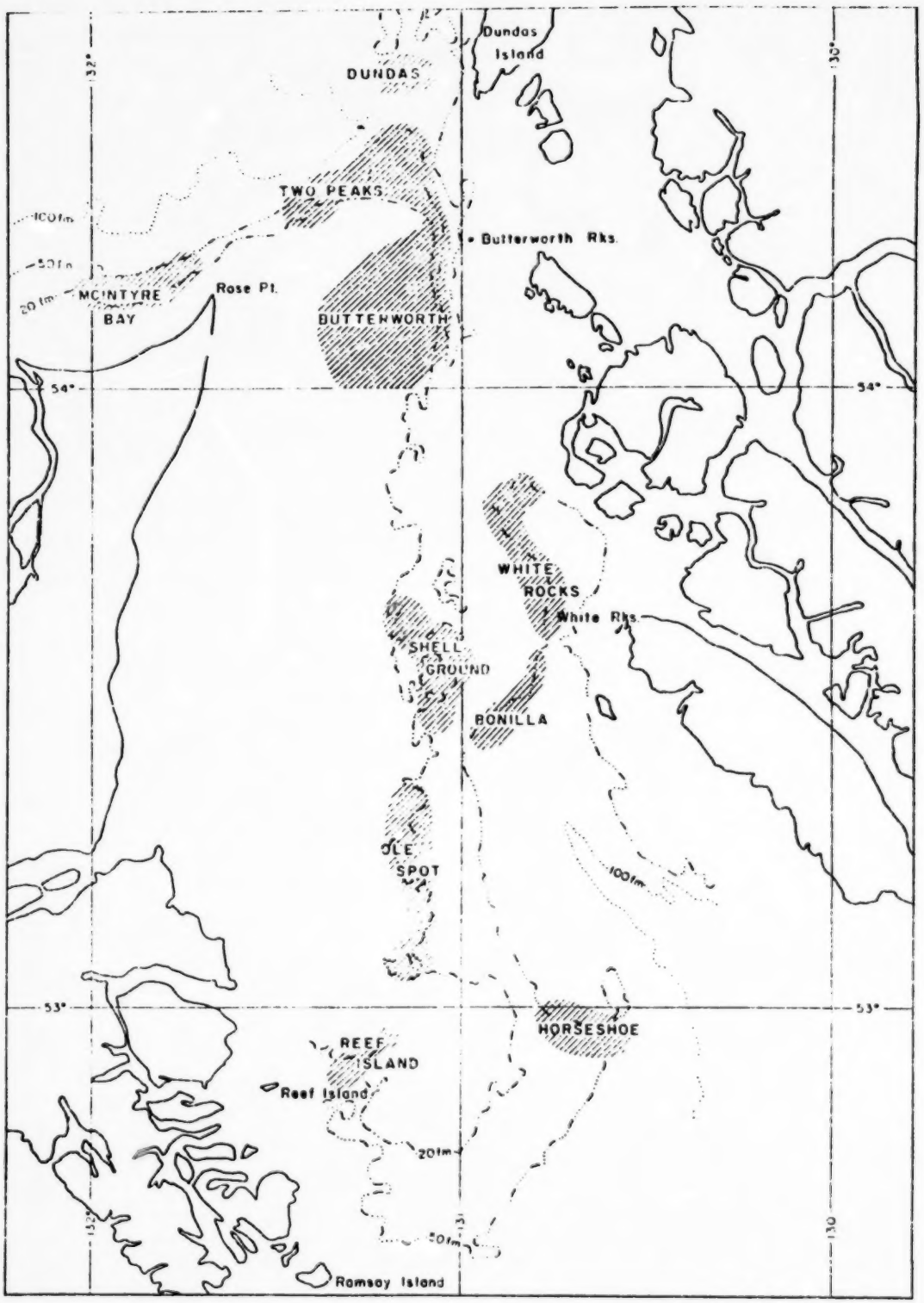

Fig. 3. Major trawling grounds in Hecate Strait.

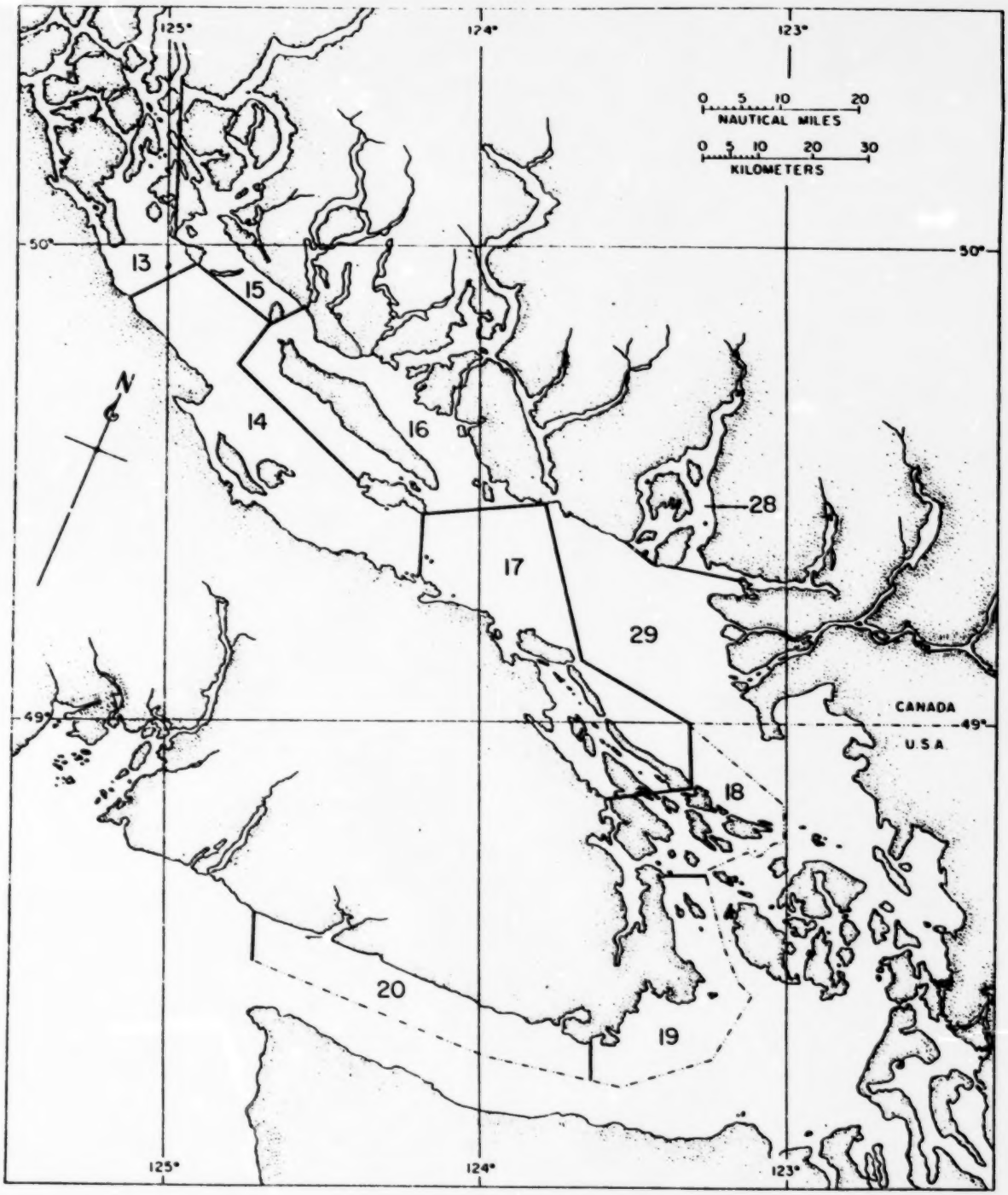

Figure 4. Minor statistical areas in major area 4B.